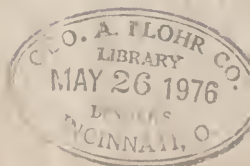
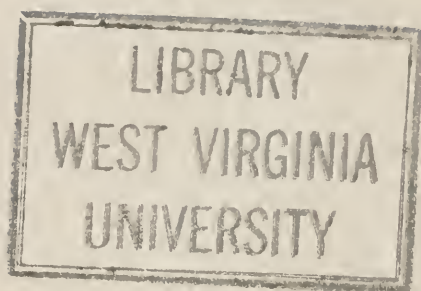


West Virginia University Libraries



3 0802 101623531 8



This book must not be
taken from the Library
building.

NINETEENTH
ANNUAL REPORT
COAL MINES

IN THE STATE OF
WEST VIRGINIA, U. S. A.

FOR THE YEAR ENDING
JUNE 30, 1901.

JAMES W. PAUL,
CHIEF MINE INSPECTOR.
CHARLESTON.



THE TRIBUNE CO. PRINT.
CHARLESTON.



TABLE OF CONTENTS.

Letter of Transmittal.....	
Introductory	

PART I.—STATISTICAL.

		Page.
Chapter	I General Summary	1
	II Production of Coal and Coke, 1901.....	4
	III Coke and Coke Ovens.....	15
	IV Machine Mining	22
	V Mine Locomotives	29
	VI Steam Boilers	32
	VII Wages and Selling Price of Coal and Coke.....	32
	VIII Transportation of Coal and Coke.....	34
	IX Powder Used in the Mines.....	36
	X Improvements at Mines	37
	XI Strikes at Coal Mines.....	38
	XII Men Employed	40

PART II.—ACCIDENTS.

Chapter	XIII Accidents—Summary	53
	XIV Explosions	84
	Berryburg Mine	87
	Chatham Shaft, Farmington	96

PART III.—ADMINISTRATIVE.

Chapter	XV Inspection Districts	102
	XVI Mine Rules	104
	XVII Oil	109
	XVIII Opinion—Attorney General	109

PART IV.—CONDITION OF MINES.

Chapter XIX	Inspections Made	111
XX	Inspections, First District	111
XXI	Inspections, Second District	157
XXII	Inspections, Third District	180
XXIII	Inspections, Fourth District	239

PART V.

Chapter XXIV	Directory of Mines	259
--------------	--------------------------	-----

APPENDIX.

Oil Law	272
Checkweighman Law	273
Elkhorn Flood	274
Rules Adopted at the Mines.....	275

W
331.7622
MW 52N
19th
1900/01

Library
West Virginia University

LETTER OF TRANSMITTAL.

Office of the Chief Mine Inspector,
Charleston, West Va.

To His Excellency, A. B. White, Governor of West Virginia:

SIR:—I have the honor to submit herewith my fifth Annual Report as the Chief Mine Inspector of the State of West Virginia.

This report embraces the reports of the inspections of mines and appears as the Nineteenth Annual report for the year ending June 30th, 1901.

Very respectfully,

JAMES W. PAUL,
Chief Mine Inspector.

December 14th, 1901.

INTRODUCTION.

This report is treated under five Parts and an appendix as follows:

Introductory.

Statistical Part I.

Accidents Part II.

Administrative Part III.

Condition of Mines Part IV.

Directory of Mines Part V.

and the Appendix which includes the subjects of Legislation Rules as adopted by the coal companies and a description of the Elkhorn flood.

The statistical tables in this report are 36 in number and aim to cover each subject in a manner sufficiently comprehensive to meet any and all demands. Each table is prefaced with such explanatory remarks as will assist to make the subject matter clear.

In the matter of accidents it becomes our duty to record two mine disasters of unusual severity. One at the Berryburg Mine in Barbour County and another at the Farmington Shaft in Marion County.

In the administration of the affairs of this department there has been an addition of one district inspector as the result of legislation. This additional force has been a great relief to this department since the development of mining has increased so largely that it was impossible for the four district inspectors to make the required inspections within the time allowed by law.

A little unpleasantness was occasioned this department by the disinclination of one of the district inspectors to perform the duties required of him. This matter was remedied, however, by the appointment of a man to succeed him.

The inspection force suffered the loss by death of Mr. Jerry Meade, who expired at Wheeling on July 2nd, 1901. Mr. Jerry Westlake, of Elm Grove, was appointed as the successor to Mr. Meade.

Much improvement has been had in the mines throughout the State, as may be learned from the condition of mines treated in Part IV.

In the Appendix will be found reference to legislation; rules as adopted by the mining companies for the government of their employes, and a description of the Elkhorn flood in McDowell County by which much life and property was lost.

The Chief Mine Inspector takes this opportunity of expressing his appreciation of the able assistance rendered him by the district inspectors in the enforcing of the mining laws.

It is a pleasure to note the deep interest manifested by our State's chief executive in the welfare of the many employes for whose benefit this department was created.

ANNUAL REPORT.

PART I.

CHAPTER I. STATISTICAL.

GENERAL SUMMARY.

The year closing June 30, 1901 records the greatest activity in the mining business in the State. Labor has been continuously employed and only a few mines experienced troubles which affected labor, most of which was occasioned by the employes demanding shorter hours and a recognition of their labor organization.

In point of production of coal there was an increase over the previous year of 1,404,080 long tons, giving the State credit with 20,290,991 long tons. The production of Coke for the year was 1,932,912 short tons, being 563,195 tons less than for the previous year.

The number of days worked at the mines was 225, which is 36 less than during 1900. At the coke ovens 235 days were worked against 264 during 1900, showing a loss of 29 days.

The price paid per ton for mining coal increased from 41.06 cents in 1900 to 44.5 cents in 1901.

The value of the coal at the mines for 1901 was \$18,104,391.90 compared with \$14,049,683.25 for 1900, showing an increase of \$4,054,708.65.

The selling price of coal increased from 75 cents in 1900 to 90 cents in 1901 and the selling price of coke from \$1.75 to \$1.85 1-2.

The number of men employed at the mines and ovens increased from 28,017 in 1900 to 32,386 in 1901 giving an increase of 4,369 men.

There has been a large increase in the production of machine mined coal, in 1900, 2,537,611 tons and in 1901, 3,582,853 tons, showing an increase of 1,045,242 tons. The increase in the pick mined coal was 333,338 tons.

Although there were two mine disasters in which 25 lives were lost the total number of lives lost during the year was 130, being 11 less than during 1900. The number of persons non-fatally injured was 180 against 176 during 1900.

There were 249 men employed for each person killed during 1901 against 198 employed for each person killed during 1900.

The most important items of interest are given in the following table, which contrasts the years 1900 and 1901.

THE FOLLOWING TABLE EXHIBITS A COMPARATIVE STATEMENT AND SUMMARY OF THE
ANNUAL REPORTS FOR 1900 AND 1901.

	Year ending June 30, 1901.	Year ending June 30, 1900.	Inc. of 1901 over 1900.	Dec. of 1901 under 1900.
Number of Counties in which coal is mined on a commercial scale . . .	21	21		
Number of firms operating coal mines on a commercial scale . . .	242	247		
Number of openings of all kinds subject to the mining law . . .	365	325		5
Number of tons (2240 lbs.) pick mined coal from commercial mines . . .	16,533,128	16,199,300	333,828	
Number of tons (2240 lbs.) machine mined coal from commercial mines . . .				
Total number of tons of coal from commercial mines (2240 lbs.) . .	3,582,823	2,537,611	1,045,242	
Estimated tons of coal from small mines (2240 lbs.) . . .	20,115,991	18,736,911	1,379,080	
Total number of tons of coal from all mines (2240 lbs.) . . .	175,000	150,000	25,000	
Number of tons of coal converted into coke (2000 lbs.) . . .	20,290,991	18,886,911	1,404,080	
Number of tons of coke manufactured (2000 lbs.) . . .	3,336,246	4,214,301		878,055
Total value of coal at the mines . . .	1,932,912	2,496,107		563,195
Total value of coke at the mines . . .	\$18,104,391.90	\$14,049,683.25	\$4,054,708.65	
Value of a ton of coal at the mines (2240 lbs.) . . .	3,635,051.76	4,368,786.49		\$733,734.73
Value of a ton of coke at the ovens (2000 lbs.)90	.75	.15	
Number of mining machines in use . . .	1,85 1-2	1,75	.10 1-2	
Average number of coke ovens in use . . .	386	241	145	
Number of days the mines were in operation . . .	6,984	7,385		401
Number of days the ovens were in operation . . .	225	261		36
Number of pick miners employed in commercial coal mines . . .	235	264		29
Number of machine operators and miners employed in commercial coal mines . . .	16,009	14,723	1,286	
Number of under-ground employees in commercial coal mines . . .	3,967	2,371	1,596	
Number of outside employees connected with the commercial coal mines . .	5,117	4,726	391	
Number of coke employees . . .	3,467	2,815	652	
Total number of men employed at the commercial mines and ovens . .	3,226	3,382		156
Number of men killed . . .	32,386	28,017	4,369	
Number of men injured non-fatally . . .	130	141		11
Number of men employed for each man killed . . .	180	176	4	
Number of men employed for each man injured . . .	249	198	51	
Tons of coal mined in commercial mines for each fatality . . .	179	160	19	
Tons of coal mined in commercial mines for each non-fatality . . .	154,738	133,949	20,789	
Number of wives left widows . . .	111,755	107,312	4,443	
Number of children left fatherless . . .	58	42	16	
Acres of coal worked out . . .	90	95		5
Number of tons of coal produced (in commercial mines) per miner, pick and machine miners and runners included . . .	2,854.56	2,638.78	515.78	
Average earnings of each miner per year . . .	1,007	1,104		97
Average earnings of each miner per month . . .	\$559.79	\$507.09	\$52.70	
Average price per ton of 2240 lbs. received for mining (cents) run of mine . . .	46.65	42.25	4.40	
	44.5	41.06	3.44	

*TABLE SHOWING THE COAL PRODUCTION BY COUNTIES
SINCE 1896, FOR THE FISCAL YEARS ENDING JUNE 30TH.*

(Quantities are expressed in tons of 2,240 lbs.)

<i>Counties.</i>	1897	1898	1899	1900	1901
Barbour	31,658	48,600	63,275	73,041	226,047
Brooke	42,198	56,793	63,176	61,396	65,904
Fayette	2,993,061	3,960,266	4,446,469	4,547,002	5,375,702
Hancock	33,838	42,870	39,440	47,013	30,357
Harrison	221,249	271,554	413,150	647,430	1,088,715
Kanawha	1,042,745	1,213,116	1,293,068	1,456,890	1,727,115
Marion	1,368,682	1,639,625	2,392,983	2,925,907	2,674,553
Marshall	162,396	165,874	233,800	242,176	199,633
Mason	111,535	109,204	106,867	85,367	98,427
McDowell	2,617,917	3,183,529	3,516,668	4,142,102	4,219,251
Mercer	873,300	1,004,379	1,144,258	1,046,937	1,052,153
Mineral	537,169	510,757	554,286	562,667	513,772
Mingo	267,789	383,280	350,294	466,695	501,410
Monongalia	31,288	68,867	56,793	82,148	75,589
Ohio	95,578	96,912	119,960	96,610	115,830
Preston	120,211	169,044	277,173	403,610	434,713
Putnam	131,522	128,851	164,004	203,449	125,321
Raleigh	63,701	79,315	93,370	68,360	102,089
Randolph	31,975	103,207	167,883
Taylor	178,397	190,532	249,103	376,030	383,223
Tucker	647,666	831,497	490,038	1,098,874	938,304
Small mines	133,929	140,000	150,000	150,000	175,000
Totals	11,705,829	14,294,865	16,250,150	18,886,911	20,290,991

COAL.

1900 vs. 1901.

The comparative statements of the production of coal as shown in the following table for the years 1900 and 1901 reveal an increase in 14 Counties (including small mines) of 2,008,785 tons and a decrease in 7 Counties of 604,705 tons.

The largest increase was in Fayette County, which was 828,700 tons, the next in order was Harrison with 441,285 tons.

Among the Counties which show a decrease Marion heads the list with 251,354 tons. This is the first year since 1889 that Marion has failed to show a large increase over the previous year's production.

Tucker County shows a decrease of 160,570 tons, followed by Putnam with 78,128 tons decrease.

*TABLE SHOWING THE COMPARATIVE STATEMENTS OF
COAL PRODUCTION FOR 1900 AND 1901.*

<i>Counties.</i>	1901	1900	<i>Inc. of 1901 over 1900.</i>	<i>Dec. of 1901 under 1900.</i>
Barbour	226,047	73,041	153,006
Brooke	65,904	61,396	4,508
Fayette	5,375,702	4,547,002	828,700
Hancock	30,357	47,013	16,656
Harrison	1,068,715	647,430	441,285
Kanawha	1,727,115	1,456,890	270,225
Marion	2,674,553	2,925,907	251,354
Marshall	199,633	242,176	42,543
Mason	98,427	85,367	13,060
McDowell	4,219,251	4,142,102	77,149
Mercer	1,052,153	1,046,937	5,216
Mineral	513,772	562,667	48,895
Mingo	501,410	466,695	34,715
Monongalia	75,589	82,148	6,559
Ohio	115,830	96,610	19,220
Preston	434,713	403,610	31,103
Putnam	125,321	203,449	78,128
Raleigh	102,089	68,360	33,729
Randolph	167,883	103,207	64,676
Taylor	383,223	376,030	7,193
Tucker	938,304	1,098,874	160,570
Small mines	175,000	150,000	25,000
Totals ..	20,290,991	18,886,911	2,008,785	604,705

TABLE SHOWING THE PRODUCTION OF COKE FOR THE YEARS 1897, 1898, 1899, 1900 AND 1901.

(Quantities are expressed in tons of 2,000 lbs.)

Counties.	1897	1898	1899	1900	1901
Barbour		1,350	5,980	12,579	12,666
Fayette	329,089	394,052	454,999	481,699	442,411
Harrison		5,419	5,871	15,994	5,190
Kanawha	20,132	21,578	10,983	32,665	30,722
Marion	142,043	149,060	155,985	298,119	118,285
McDowell	567,070	731,681	923,166	1,070,033	953,702
Mercer	115,522	145,061	192,932	207,277	167,769
Monongalia	2,778	12,337	5,204	17,077	5,777
Preston	19,567	28,450	34,023	46,250	6,500
Raleigh	18,454	20,007	20,398	15,460
Randolph	3,223	13,498
Tucker	159,842	229,261	140,638	295,731	176,392
Totals	1,374,497	1,742,256	1,950,119	2,496,107	1,932,912

TABLE GIVING THE COMPARATIVE STATEMENTS OF COKE PRODUCED FOR THE YEARS ENDING JUNE 30TH 1900 AND 1901.

(Quantities are expressed in tons of 2,000 lbs.)

Counties.	1901	1900	Inc. of 1901 over 1900.	Dec. of 1901 under 1900.
Barbour	12,666	12,579	87
Fayette	442,411	481,699	39,288
Harrison	5,190	15,994	10,804
Kanawha	30,722	32,665	1,943
Marion	118,285	298,119	179,834
McDowell	953,702	1,070,033	116,331
Mercer	167,769	207,277	39,508
Monongalia	5,777	17,077	11,300
Preston	6,500	46,250	39,750
Raleigh	15,460	15,460
Randolph	13,498	3,223	10,275
Tucker	176,392	295,731	119,339
Totals	1,932,912	2,496,107	10,362	573,557

CHAPTER II.

PRODUCTION OF COAL AND COKE, 1901.

Throughout this report coal is expressed in tons of 2,240 pounds, unless otherwise noted, and coke in tons of 2,000 pounds.

The total production of any mine refers to all the coal taken out of the mine.

The total production of coal from all sources for the year was:

20,290,991 tons, of which

162,313 tons were used in operating the mines,

257,870 tons were sold to local trade.

2,978,795 tons were used in the manufacture of coke,

16,892,013 tons were shipped from the mines.

20,290,991 tons, total.

The total production of coke was 1,932,912 tons.

PRODUCTION OF COAL AND COKE BY COUNTIES FOR THE YEAR ENDING JUNE 30th, 1901.

DISTRICT.	NAME OF COUNTY.	Production Coal (tons of 2,240 lbs.)			Distribution of Coal (Tons of 2,240 lbs.)			Production Coke (Tons of 2,000 lbs.)		
		Total Coal Produced for year.		Used in operation of Mine.	Furnished local trade and tenants.	Used in Coke Ovens.	Quantity Shipped from Mine.	1st 6 Mos.		Total for year
		1st 6 Mos.	2nd 6 Mos.					1st 6 Mos.	2nd 6 Mos.	
First.....	Brooke.....	32,347	33,557	143	6,344	59,417
First.....	Hancock.....	21,352	9,005	30,357
First.....	Harrison.....	481,660	607,055	16,290	9,073	7,553	1,055,799	2,228	2,962	5,190
First.....	Marion.....	1,324,875	1,319,678	26,881	11,777	195,745	2,440,150	55,080	63,205	118,285
First.....	Marshall.....	99,054	100,579	1,371	13,807	181,455
First.....	Monongalia.....	31,895	43,691	60	106	7,961	67,462	74	5,703	5,777
First.....	Ohio.....	52,533	63,297	1,406	18,118	96,306
Second.....	Kanawha.....	799,469	927,646	7,053	35,872	53,423	1,630,767	13,206	17,516	30,722
Second.....	Mason.....	41,410	54,017	12,682	24,328	61,417
Third.....	Fayette.....	28,498	96,823	81	2,131	123,109
Third.....	Putnam.....	2,660,100	2,715,002	43,501	60,317	706,152	4,505,632	191,305	251,106	442,411
Third.....	Raleigh.....	38,869	63,230	817	60,750	100,432
Fourth.....	McDowell.....	2,017,250	2,172,031	26,232	22,963	1,410,165	2,769,891	432,498	521,204	953,702
Fourth.....	Mereor.....	639,517	512,636	3,282	6,493	252,905	789,878	69,203	98,566	167,769
Fourth.....	Mingo.....	277,432	223,978	3,115	4,246	491,049
Fifth.....	Barbour.....	109,178	116,869	5,190	2,755	15,506	202,596	7,281	5,385	12,666
Fifth.....	Grant.....
Fifth.....	Mineral.....	269,380	214,392	194	1,658	511,920
Fifth.....	Preston.....	225,201	200,512	9,780	641	10,250	414,012	6,500	6,500
Fifth.....	Randolph.....	85,161	82,722	678	10,780	17,207	147,969	8,991	4,501	13,498
Fifth.....	Taylor.....	201,126	182,097	2,837	2,905	377,481
Fifth.....	Tucker.....	419,326	488,978	600	1,200	302,330	634,174	89,942	86,450	176,392
Totals.....	Small Mines.....	9,818,603	10,297,388	162,313	257,870	2,978,795	16,717,013	876,311	1,056,601	1,932,912
Grand Totals.....	87,500	87,500	175,000
Grand Totals.....	9,906,103	10,384,888	162,313	257,870	2,978,795	16,892,013	876,311	1,056,601	1,932,912

PRODUCTION OF COAL AND COKE FOR YEAR ENDING JUNE 30th, 1901.

NAME OF COMPANY.	NAME OF MINE.	Production Coal (Tons of 2,240 lbs.)			Distribution of Coal (Tons of 2,240 lbs.)			Production Coke (Tons of 2,000 lbs.)			
		1st 6 Mos.	2nd 6 Mos.	Total Coal Produced for year.	Used in Operation of Mine.	Furnished local trade and tenants.	Used in Coke Ovens.	Quantity shipped from Mine.	1st 6 Mos.	2nd 6 Mos.	Total for year
<i>Brooke County.</i>											
Panhandle Coal Co. (W. A. Wood, Receiver)	Blanche.....	12,088	13,085	25,773				25,773			
Gilchrist C. Co.	Gilchrist.....	7,977	9,337	17,314				17,314			
J. W. M. Carmichael	Wellsburg.....	8,890	7,410	16,300	99	6,344		9,857			
Brown C. Co.	Big Four.....	3,392	3,125	6,517	41			6,473			
Totals.....		32,347	33,557	65,904	143	6,344		59,417			
<i>Hancock County.</i>											
Marquet C. Co.	Marquet No. 1.....	12,264	3,568	15,832		15,832					
Marquet C. Co.	Marquet No. 2.....	9,088	4,009	13,097		13,097					
Cullen & Weir.....	Porter No. 1 & 2.....		1,428	1,428		1,428					
Totals.....		21,352	9,005	30,357		30,357					
<i>Harrison County.</i>											
Worthington C. & C. Co.	Worthington No. 2.....	24,700	25,000	49,700			872	48,828		121	121
Globe C. & C. Co.	Farnum.....	8,814	7,796	16,610				16,610			
Finnickmick C. & C. Co.	Pg. No. 1 & 2.....	67,125	49,764	116,889	10,450	3,500		102,939			
Briar Hill C. & C. Co.	Farnum.....	16,029	28,078	44,107			171	38,998		2,962	2,962
Briar Hill C. & C. Co.	Solon.....	4,800	17,460	22,260	153		34	22,073			
Briar Hill C. & C. Co.	Gypsy Plant.....	50,531	74,122	124,653	1,418		1,312	121,893			
Briar Hill C. & C. Co.	Viropas.....	5,088	10,293	15,381				15,259			
Briar Hill C. & C. Co.	Glen Falls.....	25,689	25,689	51,378	304		124	50,950			
Briar Hill C. & C. Co.	Dunham.....	21,518	21,518	43,036				43,036			
Briar Hill C. & C. Co.	Enterprise.....	73,435	75,815	149,250				147,946			
Howard C. & C. Co.	Howard.....	17,747	23,340	41,087	813		491	40,674			
Despard Gas C. Co.	Despard No. 2.....	4,404	19,488	23,892			416	23,476			
West Fork Mining Co.	West Fork.....	19,000	17,000	36,000	150		130	35,720			
Fairm't & Baltimore C. & C. Co.	Fairmore.....	25,497	31,736	57,233	285		155	54,281		2,107	2,107
Hutchinson C. Co.	Lynch.....	18,010	20,917	38,927			2,412	38,802			
Hutchinson C. Co.	Dolan or No. 2.....	4,315	13,874	18,189			558	17,631			
Hutchinson Ethien C. Co.	Ehlen.....		10,746	10,746			75	10,671			
Highland C. & C. Co.	Ocean.....	29,888	27,888	57,776	788			54,988			
Highland C. & C. Co.	Columbia.....	25,516	25,516	51,032	641		30	46,258			
Riverdale Mining Co.	Riverdale.....	12,000	12,000	24,000				24,000			
Meadow Brook C. & C. Co.	Meadow Brook.....	24,597	33,468	58,065	325		300	57,140			
O'Neil C. & C. Co.	O'Neil No. 1.....	17,537	18,466	36,003	540		150	35,323			
O'Neil C. & C. Co.	O'Neil No. 2.....		16,142	16,142	180		75	15,857			

PRODUCTION OF COAL AND COKE FOR YEAR ENDING JUNE 30th, 1901.

NAME OF COMPANY.	NAME OF MINE.	Production Coal (Tons of 2,240 lbs.)			Distribution of Coal (Tons of 2,240 lbs.)			Production Coke (Tons of 2,000 lbs.)			
		1st 6 Mos.	2nd 6 Mos.	Total Coal Produced for Year.	Used in Operation of Mine.	Furnished local trade and tenants.	Used in Coke Ovens.	Quantity Shipped from Mine.	1st 6 Mos.	2nd 6 Mos.	Total for the Year.
<i>Ohio County—Continued.</i>											
Wheeling Steam C. Co.	Wheeling.....	892	7,142	8,034				8,034			
Jochum C. Co.	Central.....	3,348	3,348	6,696	46	6,650					
Totals.		52,533	63,297	115,830	1,406	18,118		96,306			
<i>Kanawha County.</i>											
Falling Rock Tunnel C. Co.	Jones Bank.....		1,785	4,463	134	111		4,218			
J. G. Vaughan & Co.	Graham Mines.....		5,274	5,274				5,274			
Flk River Colliery Co.	Queen Shoals.....	2,000	5,000	7,000	95	700		6,205			
Geo. J. Tyler.....	Sycamore.....		149	149				149			
Campbells Creek C. Co.	Spring Fork.....	9,562	15,412	24,974				24,974			
Campbells Creek C. Co.	New Mine.....	37,536	59,737	97,673	900	4,322		92,361			
New Diamond C. Co.	Diamond.....	8,484	7,639	16,123		72		16,051			
Quincy C. Co.	Quincy.....	13,392	7,589	20,981	33	95		20,853			
Peabody C. Co.	Peabody.....	18,750	26,160	44,910		892		41,018			
Virginia Mining Co.	Virginia.....	17,534	16,607	34,141				34,141			
Big Mountain M. Co.	Coalburg.....	13,009	16,920	23,938	266	446		23,226			
Kellys Creek Mining Co.	C. No. 2.....	53,405	56,945	110,350				110,350			
Kellys Creek Mining Co.	C. No. 3.....	6,148	7,217	13,365				13,365			
Kellys Creek Mining Co.	D. No. 4.....	12,303	12,111	24,414				23,656			
Kellys Creek Mining Co.	B. No. 4.....	39,198	41,128	83,326				81,841			
Kellys Creek Mining Co.	E. No. 5.....		12,111	12,111		267		11,841			
Cedar Grove Colliery Co.	Cedar Grove.....	23,528	26,300	49,828	647	714		48,407			
Riverside C. Co.	Riverside.....	35,506	37,914	73,420		714		61,907			
Cannellon Coal Co.	No. 2 Gas.....	52,919	60,404	113,323	575	1,250	48,513	63,985			
Marmet Co.	Marmet Nos. 1 & 2.....	36,975	42,403	78,484	523	1,184		76,777	11,706	16,016	27,722
Winifrede C. Co.	Star.....	436	3,766	4,202	13			4,189			
Winifrede C. Co.	South.....	47,658	50,702	98,360	649	1,785		95,926			
Winifrede C. Co.	North.....	57,512	62,560	120,372	1,253	2,409		116,580			
Coalburg Colliery Co.	Ronda.....	30,398	35,654	66,252				65,752			
Stevens C. Co.	Acme.....	24,000	24,000	54,000		950		53,050			
Stevens C. Co.	Keystone.....	35,069	65,000	120,000	1,000			119,000			
Stevens C. Co.	Empire.....	20,000	46,000	66,000				66,000			
Pine Grove C. Co.	Pine Grove.....		6,428	6,428				6,428			
Robinson C. Co. (G. W. McIntie, receiver).	Klondike.....	5,386	7,275	12,661	134	785		11,742			
Robinson C. Co. (G. W. McIntie, receiver).	No. 4.....	16,121	11,893	28,014	140			27,874			
East Bank C. & C. Co.	Chestnut Point.....	9,821	11,607	21,428	446	1,070	4,910	15,002	1,500	1,500	3,000

<i>Kanawha County--Continued.</i>	Black Cat.....	11,160	11,161	22,321	22,321
Kanawha C. & M. Co.....	Coalburg & Lewiston	35,625	33,621	69,246	68,746
Belmont C. Co.....	Crown Hill.....	17,142	15,856	32,998	32,129
Town Hill C. Co.....	Chesapeake.....	65,896	68,372	134,268	115	133,410
Chesapeake Mining Co.....	Consolidated.....	8,290	17,471	25,761	24,696
Montgomery C. Co.....	St. Clair No. 1.....	5,857	5,857	5,857
Montgomery C. Co.....	St. Clair No. 2.....
Lewiston C. Co.....	Lewiston.....	100
Scranton Splint C. Co.....	Scranton.....	460	460
Totals.....		739,469	927,646	1,727,115	7,053	53,423	13,206	17,516	30,722
<i>Mason County.</i>									
Camden Clay Co.....	Camden.....	3,521	3,215	6,736	6,736
Hope Salt & C. Co.....	Hope.....	6,378	6,057	12,435	467
Mason City M. Co.....	Mason.....	6,642	6,643	13,285	893
Adelpho Salt & Coal Co.....	Jackson.....	8,079	8,079	16,158	16,158
Harford Salt & Coal Co.....	Harford.....	6,652	13,407	714	12,693
Consumers C. & M. Co.....	New Castle.....	11,055	20,853	31,888	2,816
Thos. Harris.....	Black Diamond.....	107	107	107
Klondike C. Co.....	Klondike.....	2,000	2,411	4,411	723
Totals.....		41,410	51,017	98,427	12,682	21,328	61,417
<i>Putnam County.</i>									
Plymouth C. & M. Co.....	Plymouth.....	11,911	35,482	47,393	81	85
Marmet-Smith C. & M. Co.....	Florence & Pocatalico.....	16,587	61,341	77,928	2,046
Totals.....		28,498	96,823	125,321	81	2,131	123,109
<i>Fayette County.</i>									
Lougaire Colliery Co.....	Lougaire No. 2.....	22,852	21,403	44,255	3,342	418	19,530	5,727	7,397
Lougaire Colliery Co.....	Lougaire No. 1.....	16,837	25,525	42,362	3,086	384	18,029	5,286	12,628
W. R. Johnson & Co.....	Harwood No. 2.....	35,034	31,169	66,203	480	6,075	3,517
Boomer C. & C. Co.....	Boomer No. 1.....	41,397	39,675	81,072	1,070	1,606
Falls Colliery Co.....	No. 5.....	15,000	15,000	2,000
Davis Gordon Co.....	No. 5.....	26,921	22,462	49,383	250	49,153
Davis-Gordon Co.....	Eureka.....	20,733	25,974	46,707	250	46,457
Mecca C. & C. Co.....	Mecca Splint.....	58,438	57,079	115,517	884	1,389	114,128
Coal Valley Mining Co.....	Straughan.....	5,130	6,032	11,172	236	10,052
W. R. Johnson.....	(Crescent) No. 1 Bagle.....	9,438	13,291	22,719	10,003	8,138
W. R. Johnson.....	(Crescent) No. 2 Gas.....	16,277	17,917	34,194	250	1,250	26,414	1,807	6,331
W. R. Johnson.....	(Crescent) No. 3.....	28,149	39,379	67,528	77,378
Carver Bros. Co.....	No. 2.....	36,707	39,042	75,750	66,730
Carver Bros. Co.....	No. 1.....	5,856	11,798	17,651	68,525
Carver Bros. Co.....	Bagle.....	16,131	11,495	17,685	17,351
The St. Clair Co.....	St. Clair No. 1.....	15,302	21,192	37,306	1,925	21,517	2,124	4,284
The St. Clair Co.....	St. Clair No. 2.....	14,444	15,302	30,602	10,709	4,523	9,046
The St. Clair Co.....	Forest Hill.....	4,609	13,818	28,859	28,859
				18,427	18,427

PRODUCTION OF COAL AND COKE FOR THE YEAR ENDING JUNE 30th, 1901.

NAME OF COMPANY.	NAME OF MINE.	Production Coal (Tons of 2,240 lbs.)			Distribution Coal (Tons of 2,240 lbs)			Production Coke (Tons of 2,000 lbs.)					
		1st 6 Mos.	2nd 6 Mos.	Total Coal Produced for year.	Used in operation of Mine.	Furnished local trade and tenants.	Used in Coke Ovens.	Quantity shipped from Mine.	1st 6 Mos.	2nd 6 Mos.	Total for year		
Fayette County.—Continued.													
J. F. Burdett.....	Diamond.....	23,197	20,979	44,176	813	417		42,946					
Mt. Carbon Co. Ltd.....	Excelsior.....	5,416	5,004	10,450		652		9,818					
Mt. Carbon Co. Ltd.....	Vulcan.....	58,974	55,665	114,639	728	4,177		47,344	19,026	20,605	39,631		
Gt. Kanawha Colliery Co. Ltd.....	Digby.....	30,451	35,234	65,685				58,073					
Gt. Kanawha Colliery Co. Ltd.....	No. 1.....	53,415	11,140	17,570				38,250					
Gt. Kanawha Colliery Co. Ltd.....	No. 5 Block.....	6,430	11,140	17,570				17,570					
Gauley Mountain C. Co.....	Gauley Mt.....	126,829	135,021	261,850	1,483	241		53,575	15,246	19,706	34,922		
D. S. Cook & Son C. & C. Co.....	Gaymont.....	11,964	12,315	24,279	300	210		21,411	1,455		1,455		
Victoria C. & C. Co.....	Sunnyside.....	5,430	4,381	9,811		200		9,611					
New River Mining Co.....	Elmo.....	7,926	13,536	21,462	1,200	600		19,662					
Michigan C. Co.....	Michigan.....	23,000	30,400	53,000	120	1,200		51,680					
Low Moor Iron Co.....	Kaymore & Fayette.....	32,400	32,400	64,800	360	310		64,100					
Nuttallburg C. & C. Co.....	Nuttallburg.....	32,397	57,255	89,652	300			39,757	4,346	4,956	9,302		
Newlyn C. & C. Co.....	Newlyn.....	21,858	12,360	12,360				12,360					
Nuttallburg C. & C. Co.....	Keeny's Creek.....	22,203	22,523	44,726				44,726					
Brown C. & C. Co.....	Brown.....	24,878	27,079	51,957		600		51,357					
Boone C. & C. Co.....	Boone.....	30,000	30,000	60,000	250			58,950					
Ballinger C. & C. Co.....	Ballinger No. 1.....	20,582	20,411	40,993		533		40,460					
Ballinger C. & C. Co.....	Ballinger No. 2.....	9,628	11,070	20,698		50		20,648					
Blume C. & C. Co.....	Blume.....	40,000	42,000	82,000	240	400		81,360					
Blume C. & C. Co.....	Lookout.....	6,000	7,000	13,000	22	25		12,953					
Smokeless C. & C. Co.....	Smokeless.....	21,003	18,319	39,322		500		38,822					
Rothwell C. Co.....	Dubree.....	3,872	10,980	13,952	50	200		13,702					
Rothwell C. Co.....	Quarrier.....	20,414	13,139	33,553	700	200		32,653					
Victoria C. & C. Co.....	North Caperton.....	25,000	25,000	50,000	300	320		27,780	7,200	7,200	14,400		
Victoria C. & C. Co.....	South Side.....	50,000	50,000	100,000	500	600		98,900					
Chapman C. & C. Co.....	Chapman.....	13,332	17,332	30,664	800	810		2,000					
Longdale Iron Co.....	Cliff Top.....	38,745	40,326	79,271	530	2,279		76,462	1,300	22,326	23,626		
Cliff Top.....	Cliff Top.....												
Cunard C. Co.....	Cunard.....	19,831	17,978	37,809		333		37,476					
Brooklyn C. Co.....	Brooklyn.....	26,621	27,925	54,546	1,200	595		27,263	8,190	10,380	18,570		
Fire Creek C. & C. Co.....	Fire Creek.....	29,989	23,950	53,939	215	1,100		27,107	10,070	8,767	18,837		
Central C. Co.....	Central.....	21,827	19,490	41,317	800	700		6,750	33,067	2,917	3,637		
Echo C. & C. Co.....	Echo.....	43,331	36,338	79,669				10,500	69,169				
Rush Run C. & C. Co.....	Rush Run.....	64,538	70,129	134,667	1,603	632		36,792	95,640	11,811	13,063		
Red Ash C. Co.....	Red Ash.....	65,630	61,928	126,658	1,000	739		6,927	117,992	3,651	1,405		
Thurmond C. Co.....	Thurmond.....	49,695	58,040	107,735	728	945		106,062					
Beury C. & C. Co.....	Beury C. & C. Co.....	21,981	19,749	41,730	100	2,945		12,651	2,517	3,837	6,454		
Big Bend C. Co.....	Big Bend.....	19,500	19,000	38,500	190	500		26,034					
Beechwood C. & C. Co.....	Beechwood & Keystone.....	71,000	71,000	142,000	1,000	240		12,000	3,000	3,000	6,000		

Fairfax County—Continued.

Alaska C. & I. Co.	46,186	39,680	85,866	800	600	81,166
Ephraim.....	7,100	7,100	7,100
New River Colliery Co.	92,500	92,500	185,000	2,000	1,000	156,000	8,000	8,000	16,000
Ephraim Creek C. & C. Co.	74,279	59,128	133,707	2,100	960	130,617	8,520	19,340	27,869
Harvey C. & C. Co.	122,521	119,808	242,329	201,070	850	850
Star C. & C. Co.	122,236	101,915	227,181	1,200	800	222,591
Collins Colliery Co.	32,300	30,700	72,000	2,150	69,850
Sun C. & C. Co.	47,300	50,700	98,000	14,775	83,225
Dunn Loop C. & C. Co.	61,963	50,000	111,963	22,500	13,027	13,027	13,027
Turkey Knob C. Co.	82,825	50,700	177,120	3,200	1,200	126,560	14,272	20,088	34,360
Dun Loop No. 2.....	68,879	70,615	139,494	1,221	1,006	137,164
Macdonald.....
Sugar Creek.....
White Oak Fuel Co.	22,168	37,310	59,508	59,508
Bragg Hill & Carlisle.	61,443	63,157	124,600	1,751	91,214	7,973	10,062	18,035
McKell C. & C. Co.	7,100	7,100	14,200	100	100	14,000
Quinnmont C. Co.	28,048	21,739	49,787	60	360	49,367
Robins C. Co.	107,463	95,401	200,804	1,400	2,393	189,053	566	4,965	5,531
Laurel Creek C. Co.	25,187	45,716	70,903	698	596	52,673	5,162	5,163	10,325
Greenwood C. Co.	26,398	4,300	30,698	800	30,098
Carbon C. & C. Co.	70,000	70,000	140,000	3,000	1,000	133,000	1,000	1,000	2,000
National C. & C. Co.
W. P. Rend.....
Bell Creek C. Co.
Total.....	2,680,100	2,715,602	5,375,702	43,591	60,317	4,565,612	131,305	251,106	412,411

Raleigh County

Royal C. & C. Co.	38,869	26,423	65,292	450	600	64,212
Wright C. & C. Co.	11,919	11,919	150	11,769
Raleigh C. & C. Co.	24,878	24,878	397	24,481
Stonewall C. & C. Co.
Laurel Fuel Co.
Total.....	38,869	63,220	102,080	817	750	100,492

McDowell County.

Tidewater C. & C. Co.	41,463	43,627	85,090	700	775	62,815	7,008	7,175	14,243
Bottoms Creek C. & C. Co.	44,123	50,180	94,303	300	352	63,238	3,086	10,478	13,564
Peoples C. & C. Co.	69,889	66,876	136,876	1,000	94,228	16,122	16,651	32,753
Empire.....	39,990	51,970	91,960	480	216	11,789	73,475	5,919	11,443
Shawnee C. & C. Co.	55,244	53,691	108,941	800	400	72,357	8,538	13,357	22,115
Slawnee.....	62,004	56,935	118,939	81,789	11,450	14,384	25,834
Eureka C. & C. Co.	112,400	113,800	226,200	1,837	105,061	37,150	37,013	72,457
Pulaski Iron Co.	55,477	73,587	129,064	725	37,880	9,926	12,763	22,689
Keystone C. & C. Co.	91,219	96,595	186,814	1,886	90,459	14,646	23,635	38,281
Alcoma C. & C. Co.	53,578	54,411	107,989	1,000	1,000	62,755	11,930	15,091	27,021
Gilliam C. & C. Co.	57,756	57,912	115,668	780	83,478	9,950	10,986	20,910
Rolle C. & C. Co.	48,559	62,936	111,295	250	548	71,217	10,582	17,660	28,492
Ronoke C. & C. Co.	50,953	57,930	108,613	480	750	36,742	12,932	17,568	25,480
Indian Ridge C. Co.	46,062	46,546	92,608	800	600	70,671	10,222	11,415	21,667
Arlington C. & C. Co.	56,532

PRODUCTION OF COAL AND COKE FOR YEAR ENDING JUNE 30th, 1901.

NAME OF COMPANY.	NAME OF MINE.	Production Coal (Tons of 2,240 lbs.)		Distribution Coal (Tons of 2,240 lbs.)		Production Coke (Ton of 2,000 lbs.)							
		1st 6 Mos.	2nd 6 Mos.	Total Coal Produced for year.	Used in Operation of Mine.	Furnished local trade and tenants.	Used in Coke Ovens.	Quantity Shipped from Mine.	1st 6 Mos.	2nd 6 Mos.	Total for the Year.		
<i>Preston County.</i>													
Austen C. & C. Co.	Austen	30,000	15,000	45,000	1,100	275	10,250	33,375	6,500		6,500		
Newburg C. & C. Co.	Mt. Brook Shaft	15,000	7,000	22,000	660	15		21,295					
Gorman C. & C. Co.	Gorman & West End.	13,579	10,655	24,234	60			24,154					
Irona C. Co.	Irona	38,173	34,481	72,654	1,500			71,154					
Merchants C. Co.	Tunnelton	117,300	117,300	234,600	6,000			228,600					
Oakland C. & C. Co.	Oakland	9,273	8,682	17,955	400	205		17,350					
Kingwood C. Co.	Howesville No 1.	300	5,200	5,500	50	60		5,390					
Hite C. & C. Co.	Dixie	358	3,946	4,304				4,304					
Orr C. & C. Co.	Vulcan	1,218	7,268	8,486	10	56		8,420					
Imperial C. & C. Co.	Imperial												
Totals.....		225,201	209,512	434,713	9,780	641	10,250	414,042	6,500		6,500		
<i>Randolph County.</i>													
F. P. Reese	Randolph	54,869	26,789	81,658	110	1,071		80,477					
Junior C. Co.	Harding	24,353	47,286	71,639	122	246	17,207	29,721	8,994	4,504	13,498		
Maryland Smokeless C. Co.	Weaver	9,357	38,572	47,929	446	712		37,771					
Totals.....		85,161	82,722	167,883	678	2,029	17,207	147,969	8,994	4,504	13,498		
<i>Taylor County.</i>													
Grafton C. & C. Co.	Sandlick	15,688	22,212	37,900		350		37,550					
Fleming C. & C. Co.	Flemington	48,015	37,196	85,241	1,567	581		83,093					
Colonial C. & C. Co.	Tyromnell	30,000	48,000	78,000	1,270	860		75,870					
B. F. Radabaugh & Co.	Foster	4,000	3,000	7,000				7,000					
Davis C. & C. Co.	New York	33,393	31,089	64,482		514		64,568					
Rosemont C. Co.	Rosemont	70,000	40,000	110,000		600		109,400					
Totals.....		201,126	182,997	383,223	2,837	2,905		377,481					
<i>Tucker County.</i>													
Cumberland C. Co.	Douglas	73,980	68,140	142,120	600	1,200	38,240	102,090	18,507	8,627	27,134		
W. Va. C. & Pitts. Ry. M. Dept.	Thomas Drift	148,633	144,226	292,859				24,750	10,328	18,845	29,173		
W. Va. C. & Pitts. Ry. M. Dept.	Thomas Shaft	67,762	78,167	145,929				121,179					
W. Va. C. & Pitts. Ry. M. Dept.	Thomas No. 3	11,065	18,982	30,047				30,047					
W. Va. C. & Pitts. Ry. M. Dept.	Cokeston No. 1	5,064	27,954	33,018			14,000	19,018					
W. Va. C. & Pitts. Ry. M. Dept.	Cokeston No. 2	61,531	53,544	115,075			100,300	14,775	61,107	58,978	120,085		
W. Va. C. & Pitts. Ry. M. Dept.	Cokeston No. 3	81,291	97,965	179,256			100,300	78,956					
Totals.....		449,326	488,978	938,304	600	1,200	302,340	634,174	89,942	86,430	176,392		

CHAPTER III.—COKE AND COKE OVENS.

In thirteen Counties there are 98 coke plants having a total of 10,424 ovens, the large majority of which are of the Beehive pattern.

Only 6,984 ovens were operated during the year for 235 days.

In the production of 1,932,912 tons of coke there were used 3,336,246 tons of coal of 2,000 lbs. per ton, giving a percentage of yield of 57.9 as compared with 58.7 per cent. during the previous year. Each oven in use produced during the year 276 tons.

There were employed at the ovens during the year 3,226 men.

PRODUCTION OF COKE BY COUNTIES FOR YEAR ENDING JUNE 30th, 1901.

DISTRICT.	COUNTY.	No. of Coke plants reported.	Total tons of coal used in ovens (tons of 2,000 lbs.)	Total tons of coke produced (tons of 2,000 lbs.)	Percentage of yield.	Total No. Coke ovens reported.	Total No. Coke ovens reported not in use.	Avg. No. Coke ovens operated during year.		Average No. days ovens were operated.	No. men employed on ovens.
								In county.	Per Mine.		
First	Harrison.....	3	8,459	5,190	61.4	79	30	47	20	74	9
First	Marion.....	9	219,234	118,283	53.4	931	600	331	60	210	132
First	Monongalia.....	12	8,916	3,777	64.7	66	42	24	24	140	12
Second.....	Kanawha.....	2	59,834	30,722	51.3	102	52	50	28	247	37
Third.....	Fayette.....	33	790,890	442,411	55.9	2,728	589	2,139	81	240	878
Third.....	Raleigh.....	1	78	78
Fourth.....	McDowell.....	29	1,579,384	953,702	60.3	4,419	1,180	3,239	112	293	1,381
Fourth.....	Meigs.....	7	282,803	167,769	59.3	978	385	593	81	292	337
Fifth.....	Barbour.....	2	17,366	12,666	72.2	54	28	26	26	270	9
Fifth.....	Preston.....	2	11,480	6,500	56.6	188	148	40	40	120	20
Fifth.....	Randolph.....	1	19,271	13,498	70.0	50	14	36	36	228	8
Fifth.....	Taylor.....	1	20	20
Fifth.....	Tucker.....	6	338,609	176,392	52.0	731	274	457	110	229	196
Totals.....	98	3,336,246	1,932,912	57.9	10,424	3,440	6,984	62	235	3,226
Total number of Coke ovens in the State.....										57.9	
Average number of Coke ovens operated during the year... 6,984										276.	
Average number of days operated during the year..... 235										

PRODUCT OF COKE FOR YEAR ENDING JUNE 30th, 1901.

COUNTY.	NAME OF COMPANY.	Tons of coal used ovens in of 2,000 lbs)	Tons of coke pro- duced (tons of 2,000 lbs)	No. Coke ovens re- ported.	Avg. No. use per plant.	Avg. days ovens were operated.
Harrison	Globe Coal & Coke Co.	227	121	29	29	4
	Fairmont & Baltimore C. & C. Co.	2,702	2,107	30
	Briar Hill C. & C. Co., (Farnum)	5,530	2,962	20	20	150
	Totals,.....	8,459	5,190	79	20	74
Marion	W. Fairm't C. & C. Co., (W. Fair Shaft)	30
	W. Fairm't C. & C. Co., (New England)	7,722	4,137	94	6
	Gaston Gas Coal Co.	33,558	18,061	90	35	40
	Montana C. & C. Co., (Montana)	38,106	31,129	157	106	313
	Mason C. & C. Co.	4,758	4,278	50	20	120
	Briar Hill C. & C. Co., (Murray)	387	208	96
	Virginia & Pittsburg C. & C. Co.	22,607	12,615	44	44	240
	The Monongah Co.	75,826	38,826	320	90	150
	Worthington C. & C. Co.	16,240	9,434	50	30	112
	Totals,.....	219,231	118,285	931	60	210
Monongalia	Marietta Coal & Coke Co.	20
	Briar Hill C. & C. Co., (Beechwood)	8,916	5,777	46	24	140
	Totals,.....	8,916	5,777	66	24	140
Kanawha	Cannelton Coal Co.	54,334	27,732	90	40	265
	East Bank C. & C. Co.	5,500	3,000	12	10	175
	Totals,.....	59,834	30,732	102	28	247
Fayette	Longacre Colliery Co., (No 2)	21,874	13,121	100	98	300
	Longacre Colliery Co., (No. 1)	20,194	12,115
	W. R. Johnson & Co., (Harewood) No. 2	6,804	3,517	80	27	100
	W. R. Johnson (No. 1 Eagle)	14,241	8,138	110	30
	Carver Bros. Co., (Eagle)	12,156	6,284	76	76
	The St. Clair Co., (No. 1)	22,280	9,046	85	30
	Mt. Carbon Co. Ltd., (Vulcan)	69,876	39,631	202	138	312
	Gt. Kanawha Coll. Co. Ltd., (No. 1)	42,840	22,146	69	45	300
	Gauley Mountain C. Co.	60,004	34,922	152	110	365
	D. S. Cook & Son C. & C. Co.	2,607	1,455	25	13	100
	Nuttallburg C. & C. Co., (Nuttallburg)	19,461	9,302	72	48	365
	Victoria C. & C. Co., (North Caperton)	24,132	14,400	145	127	120
	Totals,.....	598,834	307,732	1,022	282	247

Fayette—Continued.....		Chapman C. & C. Co.....	2,240	1,300	60	60
"	Longdale Iron Co.....	85,637	2,240	1,300	60	60
"	Brooklyn C. Co.....	35,534	42,990	193	193	365
"	Fire Creek C. & C. Co.....	18,570	35,534	65	61	
"	Central Coal Co.....	35,359	18,570	96	90	210
"	Echo C. & C. Co.....	7,560	3,900	50	25	90
"	Rush Run C. & C. Co.....	11,760	6,554	50	48	200
"	Red Ash Coal Co.....	41,207	24,874	92	92	300
"	Beury C. & C. Co.....	7,758	5,056	78	78	176
"	Beechwood C. & C. Co.....	14,169	6,454	60	40	290
"	Alaska C. & C. Co.....	13,440	6,000	29	28	365
"	Harvey C. & C. Co.....	29,120	16,000	100	100	160
"	Collins Colliery Co.....	46,210	27,539	100	100	265
"	Sun Coal & Coke Co.....	2,900	850	120	120	30
"	Turkey Knob C. Co.....	28,205	13,027	100	100	90
"	Macdonald Colliery Co.....	52,699	34,860	120	75	313
"	Quinnimont Coal Co.....	32,071	28,035	93	80	270
"	Greenwood Coal Co.....	8,912	5,331	50	39	150
"	Carbon C. & C. Co.....	19,219	10,325	50	50	300
"	National C. & C. Co.....	3,360	2,000	46	25	
"	W. P. Rend.....					
	Totals.....	790,890	412,411	2,728	81	240
Raleigh.....	Royal C. & C. Co.....			78		
	Totals.....			78		
McDowell.....	Tidewater C. & C. Co.....	23,298	14,243	100	60	287
"	Bottom Creek C. & C. Co.....	36,822	19,564	100	70	212
"	Peerless Coal & Coke Co.....	16,645	32,753	178	100	301
"	Empire C. & C. Co.....	18,203	11,443	100	90	225
"	Shawnee C. & C. Co.....	39,630	22,115	100	75	300
"	Eureka C. & C. Co.....	46,608	25,834	114	90	300
"	Pulaski Iron Co.....	117,668	72,457	200	190	300
"	Keystone C. & C. Co.....	47,425	22,689	100	80	365
"	Algoma C. & C. Co.....	68,288	38,281	172	140	172
"	Gilliam C. & C. Co.....	48,422	27,021	100	80	240
"	Rofe C. & C. Co.....	35,179	20,940	100	70	313
"	Ronanoke C. & C. Co.....	48,093	28,280	120	100	365
"	Indian Ridge C. & C. Co.....	41,151	24,192	100	100	150
"	Arlington C. & C. Co.....	38,837	21,607	100	65	200
"	Greenbrier C. & C. Co.....	23,199	13,999	100	85	300
"	McDowell C. & C. Co.....	38,971	18,977	130	80	300
"	Ashtand C. & C. Co.....	28,464	26,368	200	313	300
"	Elk Ridge C. & C. Co.....	44,310	28,189	100	95	300
"	Lynchburg C. & C. Co.....	50,514	38,681	213	100	365
"	Powhatan C. & C. Co.....	44,210	38,681	204	135	365
"	Upland C. & C. Co.....	89,852	45,610	218	150	365
"	Houston C. & C. Co.....	90,199	50,335	218	150	365
"		66,307	40,770	150	150	

PRODUCTION OF COKE FOR YEAR ENDING JUNE 30th, 1901.

COUNTY.	NAME OF COMPANY.	Tons of coal used in ovens. (Tons of 2,000 lbs.)	Tons of Coke Produced. (Tons of 2,000 lbs.)	No. Coke Ovens Reported.	Avg. No. ovens in use per plant.	Avg. days ovens were in use.
McDowell—Continued	Grozer C. & C. Co.	87,015	67,194	300	234	306
"	Turkey Gap C. & C. Co.	122,244	68,217	200	200	365
"	Norfolk C. & C. Co. (Norfolk)	57,081	35,242	172	120	290
"	Norfolk C. & C. Co. (Angle)	32,404	19,424	100	80	290
"	Norfolk C. & C. Co. (Lick Branch)	54,374	33,713	158	120	290
"	Shamokin C. & C. Co.	54,017	34,025	200	130	365
"	Elkhorn C. & C. Co.	68,253	41,918	170	140	245
"	Tug River C. & C. Co.			50		
	Totals	1,579,384	953,702	4,419	112	283
Mercer	Mill Creek C. & C. Co.	65,455	39,950	155	127	298
"	Coaldale C. & C. Co.	34,086	21,410	140	90	296
"	Buckeye C. & C. Co.	31,278	17,440	100	55	365
"	Caswell Creek C. & C. Co.	56,266	33,432	231	120	207
"	Booth-Bowen C. & C. Co.	42,719	28,838	177	90	300
"	Louisville C. & C. Co.	36,706	21,809	125	75	365
"	Goodwill C. & C. Co.	16,253	9,830	50	36	286
	Totals	282,803	167,769	978	81	292
Barbour	Junior Coal Co.	17,366	12,666	36	26	270
"	Laurel Hill C. & C. Co.			18		
Preston	Austin C. & C. Co.	17,366	12,666	54	26	270
"	Newburg C. & C. Co.	11,480	6,500	83	40	120
	Totals			105		
Taylor	Colonial C. & C. Co.	11,480	6,500	188	40	120
	Totals			20		
Randolph	Junior Coal Co.	19,271	13,498	50	36	228
	Totals	19,271	13,498	50	36	228

Tucker	12,817	27,131	135	50	210
W. Va. C. & Pitts. Ry. M. Dept. (Thomas Shaft)	27,720		136	60	282
W. Va. C. & Pitts. Ry. M. Dept. (Coke-ton No. 1)	15,680	29,173			
W. Va. C. & Pitts. Ry. M. Dept. (Coke-ton No. 2)	112,336	20,085	61	117	178
W. Va. C. & Pitts. Ry. M. Dept. (Coke-ton No. 3)	112,336		252	200	258
Totals.....	338,609	176,392	731	110	929

ORDER IN THE PRODUCTION OF COAL AND COKE BY COUNTIES FOR YEAR ENDING JUNE 30TH,
1901.

NAME OF COUNTY.	No. of mines.	COAL (TONS OF 2,240 LBS.)			COKE (TONS OF 2,100 LBS.)			Order In—	
		1st 6 mos.	2nd 6 mos.	Total Coal Produced for Year.	1st 6 mos.	2nd 6 mos.	Total.	Coal.	Coke.
Brooke	4	32,347	33,557	65,904				20	
Hancock	3	21,352	9,005	30,357				21	
Harrison	36	481,660	607,055	1,088,715			5,190	5	
Marion	20	1,324,875	1,349,978	2,674,853	55,080	63,205	118,285	3	5
Marshall	4	99,054	100,579	199,633				13	
Monongalia	2	31,835	43,694	75,529				19	
Ohio	7	52,533	63,297	115,830	74	5,703	5,777	11	
Kanawha	59	799,469	927,646	1,727,115				16	
Mason	8	44,410	54,017	98,427	13,206	17,516	30,722	4	6
Putum	3	28,498	96,823	125,321				18	
Payette	100	2,600,100	2,715,602	5,315,702	191,305	251,106	442,411	15	
Raleigh	6	38,869	63,230	102,089				17	
McDowell	42	2,047,220	2,172,031	4,219,251	432,498	521,204	953,702	2	1
Mercer	13	539,517	512,636	1,052,153	69,203	98,566	167,769	6	4
Mingo	12	277,432	223,978	501,410				9	
Barbour	7	109,178	116,869	226,047	7,281	5,385	12,666	12	8
Grant	1							22	
Mineral	8	269,380	244,392	513,772				22	
Preston	11	295,201	209,512	504,713	6,500		6,500	10	9
Randolph	3	85,161	82,722	167,883	8,994	4,504	13,498	14	7
Taylor	7	201,126	182,097	383,223				11	
Tucker	9	449,326	488,978	938,304	89,942	86,450	176,392	7	3
Small mines		87,500	87,500	175,000					
Totals	365	9,906,163	10,384,888	20,290,991	876,311	1,056,601	1,932,912		

TABLE SHOWING NUMBER OF COKE OVENS NOT IN USE, BY COUNTIES—1900-1901.

DISTRICT.	COUNTY.	No. Ovens not in use.	Field in which located
First.....	Harrison.....	30	Upper Monongahela.
First.....	Marion.....	600	" "
First.....	Monongalia.....	42	" "
Second.....	Kanawha.....	52	Kanawha.
Third.....	Fayette.....	589	New River.
Third.....	Raleigh.....	78	" "
Fourth.....	McDowell.....	1,180	Pocahontas.
Fourth.....	Mercer.....	385	" "
Fifth.....	Barbour.....	28	Upper Monongahela.
Fifth.....	Preston.....	148	" "
Fifth.....	Randolph.....	14	" "
Fifth.....	Taylor.....	20	" "
Fifth.....	Tucker.....	274	Upper Potomac,
	Total.....	3,440	

TABLE SHOWING NUMBER OF COKE OVENS NOT IN USE—1900-1901.

COUNTY.	NAME OF COMPANY.	No. Ovens not in use.	Field in which coke plants are located.
Harrison.....	Fairmont & Baltimore C. & C. Co.....	30	Upper Monongahela.
	Total.....	30	
Marion.....	West Fairmont C. & C. Co. (W. Fair. Shaft)...	30	Upper Monongahela.
".....	West Fairmont C. & C. Co. (New England)...	88	" "
".....	Gaston Gas C. Co.....	55	" "
".....	Montana C. & C. Co. (Montana).....	51	" "
".....	Mason Coal & Coke Co.....	30	" "
".....	Briar Hill C. & C. Co. (Murray).....	96	" "
".....	The Monongah Co.....	230	" "
".....	Worthington C. & C. Co.....	20	" "
	Total.....	600	
Monongalia..	Marietta C. & C. Co.....	20	Upper Monongahela.
".....	Briar Hill C. & C. Co. (Beechwood).....	22	" "
	Total.....	42	
Kanawha.....	Cannelton C. Co.....	50	Kanawha.
".....	East Bank C. & C. Co.....	2	" "
	Total.....	52	
Fayette.....	Longacre Colliery Co.....	2	New River.
".....	W. R. Johnson & Co.....	53	" "
".....	The St. Clair Co.....	80	" "
".....	Mt. Carbon Co. Ltd.....	55	" "
".....	Gt. Kanawha Colliery Co. Ltd.....	64	" "
".....	Gauley Mountain C. Co.....	24	" "
".....	D. S. Cook & Son C. & C. Co.....	42	" "
".....	Nuttallburg C. & C. Co.....	12	" "
".....	Victoria C. & C. Co.....	24	" "
".....	Brooklyn C. Co.....	18	" "
".....	Fire Creek C. & C. Co.....	1	" "
".....	Central Coal Co.....	6	" "
".....	Echo Coal & Coke Co.....	25	" "
".....	Beury C. & C. Co.....	2	" "
".....	Beechwood C. & C. Co.....	20	" "
".....	Alaska C. & C. Co.....	1	" "
".....	Macdonald Colliery Co.....	20	" "
".....	Quinnimont C. Co.....	45	" "
".....	Greenwood C. Co.....	13	" "
".....	National C. & C. Co.....	11	" "
".....	W. P. Rend.....	50	" "
	Total.....	21	" "
	Total.....	589	

TABLE SHOWING NUMBER OF COKE OVENS NOT IN USE—
1900-1901.

COUNTY.	NAME OF COMPANY.	No. Ovens not in use.	Field in which coke plants are located.
Raleigh.....	Royal C. & C. Co.....	78	New River.
	Total.....	78	
McDowell.....	Tidewater C. & C. Co.....	40	Pocahontas.
"	Bottom Creek C. & C. Co.....	30	"
"	Peerless C. & C. Co.....	78	"
"	Empire C. & C. Co.....	10	"
"	Shawnee C. & C. Co.....	25	"
"	Eureka C. & C. Co.....	24	"
"	Pulaski Iron Co.....	10	"
"	Keystone C. & C. Co.....	20	"
"	Algoma C. & C. Co.....	32	"
"	Gilliam C. & C. Co.....	20	"
"	Rolfe C. & C. Co.....	30	"
"	Roanoke C. & C. Co.....	30	"
"	Arlington C. & C. Co.....	35	"
"	Greenbrier C. & C. Co.....	15	"
"	McDowell C. & C. Co.....	110	"
"	Ashland C. & C. Co.....	120	"
"	Elk Ridge C. & C. Co.....	5	"
"	Lynchburg C. & C. Co.....	113	"
"	Powhatan C. & C. Co.....	69	"
"	Upland C. & C. Co.....	38	"
"	Crozer C. & C. Co.....	66	"
"	Norfolk C. & C. Co. (Norfolk).....	52	"
"	Norfolk C. & C. Co. (Angle).....	20	"
"	Norfolk C. & C. Co. (Lick Branch).....	38	"
"	Shamokin C. & C. Co.....	70	"
"	Elkhorn C. & C. Co.....	30	"
"	Tug River C. & C. Co.....	50	"
	Total.....	1,180	
Mercer.....	Mill Creek C. & C. Co.....	28	Pocahontas.
"	Coaldale C. Co.....	50	"
"	Buckeye C. & C. Co.....	45	"
"	Caswell Creek C. & C. Co.....	111	"
"	Booth-Bowen C. & C. Co.....	87	"
"	Louisville C. & C. Co.....	50	"
"	Goodwill C. & C. Co.....	14	"
	Total.....	385	
Barbour.....	Junior Coal Co.....	10	Upper Monongahela.
"	Laurel Hill C. & C. Co.....	18	"
	Total.....	28	
Preston.....	Austen C. & C. Co.....	43	Upper Monongahela.
"	Newburg C. & C. Co.....	105	"
	Total.....	148	
Randolph.....	Junior Coal Co.....	14	Upper Monongahela.
	Total.....	14	
Taylor.....	Colonial C. & C. Co.....	20	Upper Monongahela.
	Total.....	20	
Tucker.....	Cumberland C. Co.....	85	Upper Potomac.
"	W. Va. C. & P. Ry. M. Dept. (Thomas Drift)	76	"
"	W. Va. C. & P. Ry. M. Dept. (Coketon No. 1).....	61	"
"	W. Va. C. & P. Ry. M. Dept. (Coketon No. 3).....	52	"
	Total.....	274	

CHAPTER IV.

MACHINE MINING.

Machine mining continues to increase. The coal produced by machines during the year was 3,582,853 tons which is 1,045,242 tons in excess of the production in 1900.

The number of counties in which machines are used has increased to fifteen; the firms using them have increased to 90 and the number of machines in use has increased from 241 in 1900 to 386 in 1901, a gain of 145.

The gain in the total number of men employed by the machines is 1,596. During the year 3,967 men were employed in the operation of the machines and in following the machines.

Mineral and Randolph Counties appear for the first time in the list of machine mines.

*SUMMARY OF THE PRODUCTION OF MACHINE MINED COAL
IN THE STATE—1901.*

COUNTY.	No. firms using ma- chines.	No. of ma- chines used	Production machine mined coal (tons 2240 lbs.)	No. of ma- chine min- ers.	No. of ma- chine run- ners and helpers.	Total No. machine men em- ployed,	District in which located.
Harrison.....	14	54	452,242	404	108	512	First.
Marion.....	8	47	9629 20	580	98	678	First.
Marshall.....	1	4	77,307	75	12	87	First.
Kanawha.....	17	61	539,655	622	167	789	Second.
Putnam.....	1	4	18,201	23	6	29	Second.
Fayette.....	28	131	837,794	599	239	838	Third.
Raleigh.....	1	5	16,586	45	10	55	Third.
McDowell.....	6	17	93,704	84	17	101	Fourth.
Mingo.....	4	11	158,084	349	22	371	Fourth.
Barbour.....	4	20	145,089	165	29	194	Fifth.
Mineral.....	1	2	5,113	13	2	15	Fifth.
Preston.....	2	11	170,191	92	14	106	Fifth.
Randolph.....	1	10	30,894	30	20	50	Fifth.
Taylor.....	1	7	63,931	100	8	108	Fifth.
Tucker.....	1	2	11,142	30	4	34	Fifth.
Totals.....	90	386	3,582,853	3,211	756	3,967
Totals-1900.....	63	241	2,537,611	1,924	447	2,371
Gain.....	27	145	1,045,242	1,287	309	1,596

*COMPANIES OPERATING MINING MACHINES AND THE
QUANTITY OF COAL PRODUCED—1901.*

COUNTY.	NAME OF COMPANY.	No. of mine machines.	Tons of coal produced (2240 lbs.)	No. machine miners.	No. machine runners and helpers.	Total No. of men employ- ed by ma- chine' min'g	District.
Harrison.....	Worthington C. & C. Co.....	2	29,600	28	10	38	1st
"	Pinnickinnick C. & C. Co. (Nos. 1 & 2.).....	10	60,000	100	8	108	"
"	Briar Hill C. & C. Co. (Solon).....	3	22,260	22	6	28	"
"	Briar Hill C. & C. Co. (Gypsy Plant).....	13	118,420	60	18	78	"
"	Briar Hill C. & C. Co. (Viropa).....	3	14,612	28	3	31	"
"	Briar Hill C. & C. Co. (Glen Falls).....	2	48,810	26	3	29	"
"	Highland C. & C. Co. (Ocean).....	3	36,256	15	8	23	"
"	Highland C. & C. Co. (Columbia).....	3	47,032	22	6	28	"
"	Meadow Brook C. & C. Co.....	2	23,097	30	10	40	"
"	O'Neil C. & C. Co. (No. 1).....	4	36,013	30	14	44	"
"	O'Neil C. & C. Co. (No. 2).....	3	16,142	30	14	44	"
"	Two Lick Run C. Co.....	1	9	2	11	"
"	Interstate C. & C. Co.....	1	4	1	5	"
"	Perry C. & C. Co.....	1	"
	Totals.....	54	452,212	404	108	512	
Marion.....	West Fairm't C. & C. Co. (W. Fair. Shaft).....	3	53,408	20	8	28	1st
"	West Fairmont C. & C. Co. (New England).....	7	138,517	40	15	55	"
"	Montana C. & C. Co. Montana).....	2	26,150	15	4	19	"
"	Briar Hill C. & C. Co. (Murray).....	6	125,130	65	12	77	"
"	Monongah Co.....	14	369,071	310	28	338	"
"	Highland C. & C. Co. (Anderson).....	7	92,200	45	15	60	"
"	Highland C. & C. Co. (Chiefton).....	4	136,444	55	10	65	"
"	George's Creek C. & Iron Co.....	4	22,000	30	6	36	"
	Totals,	47	962,920	580	98	678	
Marshall.....	Glendale C. Co.....	4	77,307	75	12	87	1st
	Totals,.....	4	77,307	75	12	87	
Kanawha.....	Campbells Creek C. Co. (New Mine).....	5	53,467	46	14	60	2d
"	Virginia Mining Co.....	2	11,539	17	12	29	"
"	Kellys Creek M. Co. (C. No. 2).....	4	110,350	65	16	81	"
"	Kellys Creek M. Co. (C. No. 3).....	1	13,365	15	4	19	"
"	Kellys Creek M. Co. (D. No. 4).....	2	24,414	25	8	33	"
"	Kellys Creek M. Co. (B. No. 4).....	4	83,326	65	16	81	"
"	Kellys Creek M. Co. (E. No. 5).....	2	12,111	20	8	28	"
"	Riverside C. Co.....	4	28,557	30	8	38	"
"	Cannelton C. Co.....	1	42	4	46	"
"	The Marmet Co.....	4	3,700	25	15	40	"
"	Winifrede C. Co. (North).....	7	36,427	55	14	69	"
"	Stevens C. Co. (Acme).....	7	52,000	35	8	43	"
"	Kanawha C. & M. Co.....	2	22,321	40	8	48	"
"	Belmont C. Co.....	4	33,556	30	8	38	"
"	Crown Hill C. Co.....	5	28,928	60	10	70	"
"	Chesapeake M. Co.....	5	25,314	32	10	42	"
"	Scranton Splint C. Co.....	2	280	20	4	24	"
	Totals,.....	61	539,655	622	167	789	
Putnam.....	Marmet-Smith C. & M. Co.....	4	18,201	23	6	29	"
	Totals,.....	4	18,201	23	6	29	
Fayette.....	Longacre Coll. Co. (No. 2).....	6	29,433	25	4	29	3d
"	Longacre Coll. Co. (No. 1).....	6	38,289	25	5	30	"
"	Boomer C. & C. Co.....	3	81,072	55	12	67	"
"	Davis-Gordon Co. (No. 5).....	3	35,228	30	6	36	"
"	Mecca C. & C. Co.....	2	7,500	4	4	"
"	W. R. Johnson (Crescent No. 1).....	4	21,628	12	8	20	"
"	Carver Bros. Co. (No. 2).....	2	19,644	12	4	16	"
"	Carver Bros. Co. (No. 1).....	2	4,402	5	4	9	"
"	The St. Clair Co. (No. 1).....	1	10,709	2	2	"
"	The St. Clair Co. (No. 2).....	1	4,884	"
"	Mt. Carbon Co. Ltd. (Excelsior).....	2	2,796	6	2	8	"
"	Mt. Carbon Co. Ltd. (Vulcan).....	3	6,200	12	3	15	"
"	Gt. Kanawha Coll. Co. Ltd (Digby).....	2	19,587	11	6	17	"
"	Gt Kanawha Coll. Co Ltd. (No. 1).....	2	29,414	22	9	31	"
"	Gt. Kanawha Coll. Co. Ltd. (No. 5 Block).....	1	17,570	19	3	32	"

**COMPANIES OPERATING MINING MACHINES AND THE
QUANTITY OF COAL PRODUCED—1901.**

COUNTY.	NAME OF COMPANY.	No. mine machines	Tons of coal produced (2,240 lbs.)	No. machine miners.	No. machine runners and helpers.	Total No. of men employ- ed by ma- chine mining	District.
Fayette	Gauley Mountain C. Co.	14	70,593	44	22	66	3d
"	Low Moor Iron Co.	15	60,000	12	10	22	"
"	Nuttallburg C. & C. Co. (Nuttallburg)	2	5,662	2	4	16	"
"	Victoria C. & C. Co. (South Side)	1		2	2	4	"
"	Chapman C. & C. Co.	3	21,998	10	12	22	"
"	Brooklyn C. Co.	8	24,676	20	10	30	"
"	Rush Run C. & C. Co.	8	49,325	20	10	30	"
"	Red Ash C. Co.	12	66,225	35	18	53	"
"	Macdonald Colliery Co.	8	50,750	45	20	65	"
"	Carbon C. & C. Co.	3	45,599		6	6	"
"	National C. & C. Co.	3	30,898	50	10	60	"
"	W. P. Rend.	11	70,000	100	35	135	"
"	New River Mining Co.	4	10,705	15	8	23	"
	Totals.....	131	837,794	599	239	838	"
Raleigh	Raleigh C. & C. Co.	5	16,586	45	10	55	"
	Totals.....	5	16,586	45	10	55	"
McDowell	Indian Ridge C. & C. Co.	2	Not in use				4th
"	Upland C. & C. Co.	3	Not in use				"
"	Crozer C. C. Co.	3	27,613	42	9	51	"
"	Norfolk C. & C. Co. (Norfolk)	2	36,000	15	2	17	"
"	Pulaski Iron Co.	5	18,300	20	2	22	"
"	Peerless C. & C. Co.	2	11,791	7	4	11	"
	Totals.....	17	93,704	84	17	101	"
Mingo	Logan Con. C. Co. (Maritime)	1	8,973	20	2	22	"
"	Red Jacket C. Co.	3	57,021	125	6	131	"
"	Logan Con. C. Co. (Logan)	4	92,090	175	8	183	"
"	Pearl C. Co.	3		29	6	35	"
	Totals.....	11	158,084	349	22	371	"
Barbour	Philippi C. M. Co.	6	49,982	35	8	43	5th
"	The Southern C. & Trans. Co.	8	89,107	100	16	116	"
"	Century C. Co.	3	6,000	30	5	35	"
"	Laurel Hill C. & C. Co.	3					"
	Totals.....	20	145,089	165	29	194	"
Mineral	Davis C. & C. Co. (Montgomery Run)	2	5,113	13	2	15	"
	Totals.....	2	5,113	13	2	15	"
Preston	Irona C. Co.	6	36,191	22	4	26	"
"	Merchants Co.	5	134,000	70	10	80	"
	Totals.....	11	170,191	92	14	106	"
Randolph	Maryland Smokeless C. Co.	10	30,894	30	20	50	"
	Totals.....	10	30,894	30	20	50	"
Taylor	Flemington C. & C. Co.	7	63,931	100	8	108	"
	Totals.....	7	63,931	100	8	108	"
Tucker	W. Va. C. & P. Ry. M. Dept. (Thomas No. 3)	2	11,142	30	4	34	"
	Totals.....	2	11,142	30	4	34	"

*NUMBER AND KINDS OF MINING MACHINES IN THE STATE
— 1900-1901.*

DISTRICT.	COUNTY.	Electrical Mine Machines.				Compressed Air Mine Machines.			Total No. Machines.	Tons of Coal produced by machines. (Tons 2,240 lbs.)
		Jeffrey.	Morgan-Gardner.	General Electric.	Goodman's Link Belt.	Sullivan.	Harrison.	Ingersoll-Sargeant.		
First.....	Harrison	19	5		1	7	22		54	452,242
First.....	Marion.....	25	14		1		7		47	962,920
First.....	Marshall.....		4						4	77,307
Second.....	Kanawha.....	19	35		5	12			61	539,655
Second.....	Putnam.....		12	2					4	18,201
Third.....	Fayette.....	20	27			8	73	3	131	837,794
Third.....	Raleigh.....	5							5	16,586
Fourth.....	McDowell.....	13			2	12			17	93,704
Fourth.....	Mingo.....	11							11	158,084
Fifth.....	Barbour.....	15	2			3			20	145,089
Fifth.....	Milverd.....					12			2	5,113
Fifth.....	Preston.....		5			6			11	170,191
Fifth.....	Randolph.....					10			10	30,894
Fifth.....	Taylor.....		7						7	63,931
Fifth.....	Tucker.....							2	2	11,142
	Totals.....	127	101	2	9	33	80	34	386	3,582,853

*NUMBER AND KINDS OF MINING MACHINES IN THE STATE
—1900-1901.*

COUNTY.	NAME OF COMPANY.	Electrical Mine Machines				Compressed Air Mine Machines.			Total No. Machines.	Tons of Coal produced by Machines. [Tons of 2,240 lbs.]
		Jeffrey.	Morgan-Gardner.	General Electric.	Goodman's Link Belt.	Sullivan.	Harrison.	Ingersoll-Sargeant.		
Harrison	Worthington C. & C. Co.....	...	2	2	29,600
"	Pinnickinnick C. & C. Co.....	10	10	60,000
"	Briar Hill C. & C. Co. (Solon)...	3	3	22,260
"	Briar Hill C. & C. Co. (Gypsy Plant).....	13	13	118,420
"	Briar Hill C. & C. Co. (Virpa)...	3	3	14,612
"	Briar Hill C. & C. Co. (Glen Falls).....	5	5	48,810
"	Highland C. & C. Co. (Ocean)...	3	3	36,256
"	Highland C. & C. Co. (Columbia).....	3	3	47,082
"	Meadow Brook C. & C. Co.....	...	2	2	23,097
"	O'Neil C. & C. Co. (No. 1).....	4	...	4	36,013
"	O'Neil C. & C. Co. (No. 2).....	3	...	3	16,142
"	Two Lick Run C. Co.....	1	1	...
"	Interstate C. & C. Co.....	1	1	...
"	Perry C. & C. Co.....	...	1	1	...
	Totals.....	19	5	...	1	...	7	22	54	452,242
Marion	West Fairmont C. & C. Co. (W. Fair. Shaft).....	3	3	53,408
"	West Fairmont C. & C. Co. (New England).....	7	7	138,517
"	Montana C. & C. Co. (Montana).....	2	2	26,150
"	Briar Hill C. & C. Co. (Murry)...	6	6	125,130
"	Monongah Co.....	...	14	14	369,071
"	Highland C. & C. Co. (Anderson).....	7	7	92,200
"	Highland C. & C. Co. (Chiefton).....	3	1	4	136,444
"	George's Cr. C. & I. Co.....	4	4	22,000
	Totals	25	14	...	1	7	47	962,920
Marshall	Glendale C. Co.....	...	4	4	77,307
	Totals.....	...	4	4	77,307
Kanawha	Campbells Cr. C. Co. (New Mine).....	5	5	53,467
"	Virginia M. Co.....	...	1	1	2	11,539
"	Kellys Creek M. Co. (C. No. 2)...	...	4	4	110,350
"	Kellys Creek M. Co. (C. No. 3)...	1	1	13,365
"	Kellys Creek M. Co. (D. No. 4)...	...	2	2	24,414
"	Kellys Creek M. Co. (B. No. 4)...	...	4	4	83,326
"	Kellys Creek M. Co. (E. No. 5)...	1	1	2	12,111
"	Riverside C. Co.....	1	3	4	28,537
"	Cannelton C. Co.....	...	1	1	...
"	The Marmet Co.....	...	4	4	3,700
"	Winifrede C. Co. (North).....	...	7	7	36,427
"	Stevens C. Co (Acme).....	7	7	52,000
"	Kanawha C. & M. Co.....	1	1	2	22,321
"	Belmont C. Co.....	...	4	4	33,556
"	Crown Hill C. Co.....	5	5	28,928
"	Chesapeake M. Co.....	...	1	4	5	25,314
"	Scranton Splint C. Co.....	2	2	280
	Totals.....	19	35	...	5	2	61	539,655
Putnam	Marmet-Smith C. & M. Co.....	...	2	2	4	18,201
	Totals.....	...	2	2	4	18,201
Fayette	Longacre Coll. Co. (No. 2).....	2	4	...	6	29,433
"	Longacre Coll. Co. (No. 1).....	3	3	...	6	38,289
"	Boomer C. & C. Co.....	...	3	3	84,072
"	Davis Gordon Co. (No. 5).....	3	3	35,228
"	Mecca C. & C. Co.....	...	2	2	7,500

NUMBER AND KINDS OF MINING MACHINES IN THE STATE
—1900-1901.—Continued.

COUNTY.	NAME OF COMPANY.	Electrical Mine Machines				Compressed Air Mine Machines.			Total No. Machines.	Tons of Coal produced by Machines, of 2,240 lbs.
		Jeffrey.	Morgan-Gardner.	General Electric.	Goodman's Link Belt.	Sullivan.	Harrison.	Ingersoll-Sargeant.		
Fayette.....	W. R. Johnson (Crescent No. 1)	2	2	4	21,628
"	Carver Bros. Co. (No. 2).....	2	2	19,644
"	Carver Bros. Co. No. 1).....	1	1	2	4,402
"	The St. Clair Co. (No. 1).....	1	1	10,709
"	The St. Clair Co. (No. 2).....	1	1	4,884
"	Mt. Carbon Co. Ltd. (Excelsior.)	2	2	2,796
"	Mt. Carbon Co. Ltd. (Vulcan).....	1	2	3	6,200
"	Gt. Kanawha Coll. Co. Ltd. (Digby).....	2	2	19,587
"	Gt. Kanawha Coll. Co. Ltd. (No. 1).....	2	2	29,414
"	Gt. Kanawha Coll. Co. Ltd. (No. 5 Block).....	1	1	17,570
"	Gauley Mt. C. Co.....	14	14	70,593
"	Low Moor Iron Co.....	15	15	60,000
"	Nuttallburg C. & C. Co (Nuttallburg).....	2	2	5,662
"	Victoria C. & C. Co. (South Side).....	1	1
"	Chapman C. & C. Co.....	2	1	3	21,998
"	Brooklyn C. Co.....	7	7	24,676
"	Rush Run C. & C. Co.....	8	8	49,325
"	Red Ash C. Co.....	12	12	66,225
"	Macdonald Coll. Co.....	8	8	50,757
"	Carbon C. & C. Co.....	3	3	45,599
"	National C. & C. Co.....	1	2	3	30,898
"	W. P. Rend.....	11	11	70,000
"	New River M. Co.....	3	1	4	10,705
	Totals.....	20	27	8	73	3	131	837,794
Raleigh.....	Raleigh C. & C. Co.....	5	5	16,586
	Totals.....	5	5	16,586
McDowell.....	Indian Ridge C. & C. Co.....	2	2	n't in use
"	Upland C. & C. Co.....	3	3
"	Crozer C. & C. Co.....	3	3	27,613
"	Norfolk C. & C. Co. (Norfolk)	2	2	36,000
"	Pulaski Iron Co.....	5	5	18,300
"	Peerless C. & C. Co.....	2	2	11,791
	Totals.....	13	2	2	17	93,704
Mingo.....	Logan Cons. C. Co. (Maritime)..	1	1	8,973
"	Red Jacket C. Co.....	3	3	57,021
"	Logan Cons. C. Co. [Logan].....	4	4	92,090
"	Pearl C. Co.....	3	3
	Totals.....	11	11	158,084
Barbour.....	Philippi C. M. Co.....	5	1	6	49,982
"	The Southern C. & T. Co.....	8	8	89,107
"	Century C. Co.....	2	1	3	6,000
"	Laurel Hill C. & C. Co.....	3	3
	Totals.....	15	2	3	20	145,089
Mineral.....	Davis C. & C. Co. (Montgomery Run).....	2	2	5,113
	Totals.....	2	2	5,113
Preston.....	Irona C. Co.....	6	6	36,191
"	Merchants C. Co.....	5	5	134,000
	Totals.....	5	6	11	170,191

NUMBER AND KINDS OF MINING MACHINES IN THE STATE
—1900-1901.—Continued.

COUNTY.	NAME OF COMPANY.	Electrical Mine Machines				Compressed Air Mine Machines.			Total No. Machines.	Tons of Coal produced by Machines. [Tons of 2,240 lbs.]
		Jeffrey.	Morgan-Garner.	General Electric.	Goodman's Link Belt.	Sullivan.	Harrison.	Ingersoll-Sargeant.		
Randolph..	Maryland Smokeless C. Co.....	10	10	30,894
	Totals	10	10	30,894
Taylor.....	Flemington C. & C. Co	7	7	63,931
	Totals	7	7	63,931
Tucker	W. Va. C. & P. Ry. M. Dept. (Thomas No. 3)	2	2	11,142
	Totals.....	2	2	11,142

COMPARATIVE STATEMENT OF PICK AND MACHINE MINED COAL, BY COUNTIES, FOR 1901.

DISTRICT.	COUNTY.	Pick Mined Coal Tons of (2,240)	Machine mined coal. tons of (2,240 lbs.)	Total (Tons of 2,240 lbs.)
First.....	Brooke.....	65,904	65,904
"	Hancock.....	30,357	30,357
"	Harrison.....	636,473	452,242	1,088,715
"	Marion.....	1,711,633	962,920	2,674,553
"	Marshall.....	122,326	77,307	199,633
"	Monongalia.....	75,589	75,589
"	Ohio.....	115,830	115,830
Second.....	Hanawha.....	1,187,460	539,655	1,727,115
"	Mason.....	98,427	98,427
"	Putnam.....	107,120	18,201	125,321
Third.....	Fayette.....	4,537,908	837,794	5,375,702
"	Raleigh.....	85,503	16,586	102,089
Fourth.....	McDowell.....	4,125,547	93,704	4,219,251
"	Mercer.....	1,052,153	1,052,153
"	Mingo.....	343,326	158,084	501,410
Fifth.....	Barbour.....	80,958	145,089	226,047
"	Grant.....
"	Mineral.....	508,659	5,113	513,772
"	Preston.....	264,522	170,191	434,713
"	Randolph.....	136,989	30,894	167,883
"	Taylor.....	319,292	63,931	383,223
"	Tucker.....	927,162	11,142	938,304
	Totals.....	16,533,138	3,582,853	20,115,991

CHAPTER V.

MINE LOCOMOTIVES.

During the year Marshall and Mason Counties dropped from the list of counties in which mine locomotives were used, and Harrison, Mineral and Preston counties appear in the list for the first time.

There is a notable increase in electrical and a decrease in steam locomotives.

During the year there has been a decrease of 9 steam and one compressed air locomotives and an increase of 35 electrical locomotives.

SUMMARY OF THE NUMBER OF MINE LOCOMOTIVES IN USE IN THE STATE—1901.

DISTRICT.	COUNTY.	Locomotives.			No. mines using loco- motives.
		Steam.	Electric.	Comp. Air	
First	Hancock	1			1
First	Harrison		1		1
First	Marion		6		4
Second	Kanawha	1	9		9
Second	Putnam	2	1		2
Third	Fayette	16	18	1	25
Third	Fayette	1			1
Fourth	McDowell	21	18	2	28
Fourth	Mercer	15	3		3
Fourth	Mingo		4		3
Fifth	Barbour		3		2
Fifth	Mineral	1			1
Fifth	Preston	1	1		2
Fifth	Taylor	1	2		2
Fifth	Tucker	1	11		7
	Totals	60	78	3	96
	Totals for 1900	69	43	4	72

*NUMBER AND KIND OF LOCOMOTIVES IN USE AT THE
MINES—1901.*

COUNTY.	NAME OF FIRM.	Locomotives.			
		Steam.	Electric.	Comp	Air.
Hancock	Marquet Coal Co. (No. 2)	1			
	Totals.....	1			
Harrison.....	Two Lick Run Coal Co.....		1		
	Totals.....		1		
Marion	P e Monongah Co. (Nos. 2, 3, 5 & 6)..		6		
	Totals.....		6		
Kanawha.....	Campbells Creek C. C. Co. (New Mine)		1		
"	Caine Iron Coal Co.		1		
"	The Marmet Co.		1		
"	Winifrede Coal Co. (North)		1		
"	Stevens Coal Co. (Acme)		1		
"	Stevens Coal Co. (Keystone)		1		
"	Belmont Coal Co.		1		
"	Crown Hill Coal Co.		1		
"	Chesapeake Mining Co.	1	1		
	Totals.....	1	9		
Putnam.....	Plymouth Coal & M. Co.	1			
"	Marmet Smith C. & M. Co.	1	1		
	Totals.....	2	1		
Fayette	Boomer Coal & Coke Co.....		1		
"	Davis Gordon Co. (No. 5)		1		
"	Mecca C. & C. Co.		1		
"	W. R. Johnson (Crescent No 5)	1			
"	Carver Bros. Co. (No. 2)		1		
"	Carver Bros. Co. (No. 1)		1		
"	Carver Bros. Co. (Eagle)		1		
"	The St. Clair Co. (No. 1)		1		
"	Mt. Carbon Co. Ltd. (Excelsior)		1		
"	Mt. Carbon Co. Ltd. (Vulcan)				1
"	Gt. Kanawha Coll. Co. Ltd. (No. 1)		1		
"	Gauley Mountain C. Co.	4			
"	Nuttallburg C. & C. Co. (Nuttallburg)		1		
"	Fire Creek C. & C. Co.	1			
"	Rush Run C. & C. Co.		1		
"	Red Ash Coal Co.		1		
"	Thurmond Coal Co.		2		
"	Alaska C. & C. Co.	1			
"	New River Colliery Co.	1			
"	Harvey C. & C. Co.	1			
"	Sun C. & Co.		2		
"	Greenwood C. Co.	2			
"	Carbon C. & C. Co.		1		
"	W. P. Rend.	4	1		
"	Bell Creek C. Co.	1			
	Totals.....	16	18		1
Raleigh.....	Raleigh C & C. Co.		1		
	Totals		1		
McDowell	Tidewater C. & C. Co.	1			
"	Bottom Creek C. & C. Co.	1			
"	Peerless C. & C. Co.	2			2
"	Empire C. & C. Co.	1			
"	Shawnee C. & C. Co.		1		
"	Eureka C. & C. Co.	1			
"	Pulaski Iron Co.		2		
"	Keystone C. & C. Co.	3			
"	Algoma C. & C. Co.		1		
"	Gilliam C. & C. Co.		1		
"	Rolfe C. & C. Co.		1		
"	Indian Ridge C. & C. Co.		1		

NUMBER AND KIND OF LOCOMOTIVES IN USE AT THE MINES—1901.—Continued.

COUNTY.	NAME OF FIRM.	Locomotives.		
		Steam.	Electric	Comp. Air.
McDowell	Arlington C. & C. Co.		1	
"	Greenbrier C. & C. Co.		1	
"	McDowell C. & C. Co.	1		
"	Elk Ridge C. & C. Co.	1		
"	Lynchburg C. & C. Co.	2		
"	Powhatan C. & C. Co.	1		
"	Upland C. & C. Co.		1	
"	Houston C. & C. Co.	1		
"	Crozer C. & C. Co.		5	
"	Turkey Gap C. & C. Co.	2		
"	Norfolk C. & C. Co. (Norfolk)		1	
"	Norfolk C. & C. Co. (Angle)		1	
"	Norfolk C. & C. Co. (Lick Branch)	1		
"	Shamokin C. & C. Co.	2		
"	Elkhorn C. & C. Co.	1		
"	Tug River C. & C. Co.		1	
	Totals	21	8	2
Mercer	Mill Creek C. & C. Co.	3		
"	Coaldale C. Co.		2	
"	Buckeye C. & C. Co.	2		
"	Caswell Creek C. & C. Co.	3		
"	Booth Bowen C. & C. Co.	4		
"	Louisville C. & C. Co.		1	
"	Goodwill C. & C. Co.	1		
"	Pocahontas Coll. Co.	2		
	Totals	15	3	
Mingo	Logan Cons. C. Co. (Maritime)		1	
"	Red Jacket C. Co.		1	
"	Logan Cons. C. Co. (Logan)		2	
	Totals		4	
Barbour	Phlippi C. M. Co.		2	
"	The Southern C. & Trans. Co.		1	
	Totals		3	
Mineral	Davis C. & C. Co. (Montgomery Run)	1		
	Totals	1		
Preston	Merchants C. Co.		1	
"	Kingwood C. Co.	1		
	Totals	1	1	
Taylor	Flemington C. & C. Co.		2	
"	Colonial C. & C. Co.	1		
	Totals	1	2	
Tucker	Cumberland C. Co.	1		
"	W. Va. C. & P. Ry. M. Dept. (Th s. Drift)		4	
"	W. Va. C. & P. Ry. M. Dept. (Thos. Shaft)		2	
"	W. Va. C. & P. Ry. M. Dept. (Thos. No. 3)		1	
"	W. Va. C. & P. Ry. M. Dept. (Coketon No. 1)		1	
"	W. Va. C. & P. Ry. M. Dept. (Coketon No. 2)		1	
"	W. Va. C. & P. Ry. M. Dept. (Coketon No. 3)		2	
	Totals	1	11	

CHAPTER VI.

STEAM BOILERS AT COAL MINES AND ACRES OF COAL
WORKED OUT—1900-1901.

DISTRICT	COUNTY.	No. mines having boil- ers.	No. insured.	No. not in- sured.	Total No. of boilers.	Acres of coal worked out.
First.....	Brooke.....					10.85
First.....	Hancock.....	2	2		2	5.07
First.....	Harrison.....	20	28	3	31	112.26
First.....	Marion.....	18	58		58	297.38
First.....	Marshall.....	4	10	3	13	34.69
First.....	Monongalia.....	1	1		1	8.41
First.....	Ohio.....	2		3	3	18.94
Second.....	Kanawha.....	20	28	10	38	293.94
Second.....	Mason.....	1		2	2	16.10
Second.....	Putnam.....	2	4	2	6	18.05
Third.....	Fayette.....	51	84	28	112	975.37
Third.....	Raleigh.....	2	7		7	21.10
Fourth.....	McDowell.....	31	78	27	105	540.98
Fourth.....	Mercer.....	7	12	12	24	117.60
Fourth.....	Mingo.....	5		10	10	71.73
Fifth.....	Barbour.....	5	6	6	12	28.94
Fifth.....	Grant.....					
Fifth.....	Mineral.....	4		5	5	44.82
Fifth.....	Preston.....	6	3	9	12	75.50
Fifth.....	Randolph.....	2	2	2	4	14.50
Fifth.....	Taylor.....	2	3	2	5	42.53
Fifth.....	Tucker.....	4	18		18	105.80
	Totals.....	189	344	124	468	2,854.56

CHAPTER VII.

WAGES PAID AND SELLING PRICE OF COAL AND COKE.

The miners in the State are paid by the screened bushel; by the ton of run-of-mine, and by the car of a varying capacity.

In the table given below the prices per ton for pick mining are shown for run-of-mine and screened coal.

WAGES PAID AND SELLING PRICE OF COAL AND COKE FOR 1901.

DISTRICT.	COUNTY.	Paid Pick Miners per ton of Coal of 2,240 lbs.		Trackman's Daily Wages	Selling Price of	
		Run of Mine.	Screened.		Coal (2,240 lbs.)	Coke (2,000 lbs.)
First.....	Brooke.....	\$.57	\$.89	\$ 2.08	\$.917 $\frac{1}{2}$	\$.....
First.....	Hancock.....		.56	1.75	.90
First.....	Harrison.....	.46		1.78	.75
First.....	Marion.....	.45		1.90	.75	1.50
First.....	Marshall.....		.77	2 16 $\frac{1}{2}$.91
First.....	Monongalia.....	.41 $\frac{1}{2}$		1.90	
First.....	Ohio.....		.78	2 14	.88
Second.....	Kanawha.....	.42	.78	1.80	1.01
Second.....	Mason.....	.47	.65	1.35	.94
Second.....	Putnam.....		.63	1.71	1.00
Third.....	Fayette.....	.43	.70	2.00	.96	2.07
Third.....	Raleigh.....	.40	.50	2.00	.91
Fourth.....	McDowell.....	.37	.50	2.07	1.05	1.75
Fourth.....	Mercer.....	.39		2.07	1.01	1.74
Fourth.....	Mingo.....	.36 $\frac{1}{2}$.67	1.89	.85
Fifth.....	Barbour.....	.40		2.15	.67 $\frac{1}{2}$	2 10
Fifth.....	*Grant.....				
Fifth.....	Mineral.....	.56		2 10 $\frac{1}{2}$.81 $\frac{1}{2}$
Fifth.....	Preston.....	.53		1.73	1.08 $\frac{1}{2}$	2.00
Fifth.....	Randolph.....	.47	.61		.77	2.10
Fifth.....	Taylor.....	.42		1.60	.97
Fifth.....	Tucker.....	.45		2.01	.85	1.58
Averages.....		.44 10-17	.67	1.91	90 1-10	1.85 $\frac{1}{2}$

*Grant county pays pick miner \$2.62 $\frac{1}{2}$ per day.

SUMMARY OF WAGES PAID MACHINE MINERS, RUNNERS AND HELPERS—1901.

DISTRICT	COUNTY.	Paid Machine Miners.					Machine run- ners.	Machine Run- ners paid by.	Machine help- ers.	Machine help- ers paid by.
		Per day.	lt of M.	Screened.	By weight measure.	R. O. M. equiv. to 2240 lbs.				
First.....	Harrison.....	\$.....	\$.28	\$.57	lbs. 2240	\$.28	\$ 2.63	Day	\$ 1.87 $\frac{1}{2}$	Day
First.....	Marion.....		.28		"	.28	.09	Ton	.04 $\frac{1}{2}$	Ton
First.....	Marshall.....			.51 $\frac{1}{2}$	"		.07	Day	2.00	Day
Second.....	Kanawha.....		.31	.45	"	.31	.38	Day	.06	Ton
Second.....	Putnam.....		.20		"	.20	scr'n'd Ton	2.20		
Third.....	Fayette.....	1.67 $\frac{1}{2}$.27	.40	"	.27	.21	Day	1.79	Day
Third.....	Raleigh.....		.20		"	.20	.05 $\frac{1}{2}$	Hour	.21	Hour
Fourth.....	Mingo.....		.34		"	.34	.21	Foot		
Fourth.....	McDowell.....	1.50	.20		"	.20	.06 $\frac{1}{2}$	Day	1.90	Day
Fifth.....	Barbour.....		.30		"	.30	2.22	Day	1.73	Day
Fifth.....	Mineral.....		.25		"	.25	.06 $\frac{1}{2}$	Ton		
Fifth.....	Preston.....		.34		"	.34	.08	Foot	2.00	Day
Fifth.....	Randolph.....		.26		"	.26	.10	Day	1.82	Day
Fifth.....	Taylor.....		.24		"	.24	.05 $\frac{1}{2}$	Day	1.68	Day
Fifth.....	Tucker.....		.45		"	.45	.07 $\frac{1}{2}$	Day	1.85	Day
Averages.....		1.58 $\frac{3}{4}$.28	.48 $\frac{3}{8}$	"	.28	.08	Ton	.06	Ton
							2.27 1-5	Day	1.83	Day
							.087 $\frac{1}{2}$	Ton	.05 $\frac{1}{8}$	Ton
							.21	scr'n'd Hour	.21	Hour
							.06	Foot		

CHAPTER VIII.

TRANSPORTATION OF COAL AND COKE.

In the table following will be found statements of the tons of Coal and Coke handled by the railroads in the State, the tonnage consumed and the points of distribution of the product.

Acknowledgment is made to the various General Freight Agents of the roads for the data which make the contents of this table.

Credit is due the office of the U. S. Resident Engineer, Charleston, for the river shipments of coal given in the table following.

STATEMENT OF THE TONNAGE OF COAL AND COKE FROM COLLIERIES IN WEST VIRGINIA, HANDLED AND TRANSPORTED BY THE RAILROADS IN THE STATE DURING THE TWELVE MONTHS, ENDING JUNE 30th, 1901.

[Quantities are expressed in tons of 2,000 lbs.]

Name of Railroad Company.	Total tons of coal handled.	Tons originating on the line.		Tons delivered to the line by other railroads in West Virginia.				Tons delivered in fuel used by the line in the State.		Railroad and docks to which product is delivered for distribution.	Points of destination of the product.	
		Coal.	Coke.	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.		East.	West.
Baltimore & Ohio.....	5,418,779	4,103,900	133,251	1,014,879	181,838	1,972,183	279,627	618,189	Loose Point, Cleveland, & Sandusky.	Philadelphia, Baltimore and Atlantic Coast.	Chicago, Lake Ports, and Northwest.
West Virginia Central & Pittsburg ..	1,678,481	1,619,063	218,192	29,449	none	80,361	41,146	69,183	57	Balto. & Ohio R. R., & Penn. R. R.	Wash'tn., Balto., Phil., South Amboy, N. J., and Pt. Reading, N. J., &c.	Chicago, St. Louis, Cleveland and Sandusky.
Kanawha & Michigan...	863,127	798,997	66,877	61,170	4,668	30,186	To various R. R.'s, T. & O. C. Ry. Docks, Toledo, O.	Various.	Various.
Norfolk & Western.....	1,523,017	1,522,464	1,233,326	186	5,884	none	none	So. Ry., A. C. L., S. A. L., C. & E., P. C. C. & St. L., R. C. C. & C. & W. Ry., B. & O., W. Ry., L. & N., Lambert Point, Va., Toledo, and Sandusky.	Va., N. C., S. C., Tidewater, points on Atlantic coast and foreign ports.	Cincinnati, Chicago, Ind., Ohio, Lake coal, Duluth, Milwaukee and Chicago.
Chesapeake & Ohio.	4,895,059	1,879,701	377,099	15,358	none	53,137	695	209,581	647	C. & O. Docks at Newport News and various railroads.	Coastwise, export to New England and New York.	Chicago, Cincinnati, Louisville, Toledo and other points too numerous to mention
Totals....	17,378,493	22,240,616	2,029,845	1,123,816	189,692	2,411,865	321,768	978,112	704			

*Consumed by engines on entire line.

*STATEMENT OF NUMBER OF TONS OF COAL, INCLUDING
THAT MANUFACTURED INTO COKE SHIPPED BY
RIVER FROM MINES ON THE GREAT KA-
NAHWA, FOR THE CALENDAR
YEARS NAMED.*

1899,.....	23,570,000 bushels, or 942,800 tons of 2,000 lbs.
1900,.....	31,017,000 " " 1,210,680 " " 2,000 lbs.
	of the above, the following quantity was coke:
1899,.....	2,500 tons of 2,000 lbs.
1900,.....	4,000 " " 2,000 lbs.

CHAPTER IX.

POWDER USED IN THE MINES.

In the mining of 12,063,473 tons of coal at 176 mines there were used 158,309 kegs of powder, each keg producing an average of 76 tons of coal.

The price paid by the miners per keg of powder ranged from \$1.25 to \$2.31, the average price in the State being \$1.80 per keg.

*NUMBER OF KEGS OF POWDER USED AT THE MINES
DURING 1901—BY COUNTIES.*

DISTRICT.	COUNTY	No. Opera- tions re- porting.	Tons of coal (2,240 lbs.)	Kegs of powder used.	Tons per keg used.	Cost per keg to Miners.
First	Brooke	3	40,131	305	131	\$ 1.63 $\frac{3}{4}$
First	Hancock	1	1,428	15	95	1.50
First	Harrison	13	365,459	4,432	82	1.62 $\frac{1}{2}$
First	Marion	5	320,636	5,740	55	1.75
First	Marshall	3	188,004	1,220	154	1.70
First	Monongalia	1	33,200	200	166	1.25
First	Ohio	3	58,975	512	113	1.53
Second	Kanawha	26	1,119,505	12,620	88	1.95
Second	Mason	5	80,624	1,404	59	1.82
Second	Putnam	1	47,393	9,6	51	2.00
Third	Fayette	44	3,063,517	39,143	78	2.9
Third	Raleigh	3	102,089	819	124	2.31 $\frac{1}{4}$
Fourth	McDowell	30	3,665,678	46,919	78	2.00
Fourth	Mercer	8	1,010,485	16,716	62	2.00
Fourth	Mingo	5	218,630	3,621	60	1.87 $\frac{1}{2}$
Fifth	Barbour	3	99,381	1,710	58	1.57
Fifth	Mineral	4	155,713	822	189	2.00
Fifth	Preston	5	97,745	1,105	88	1.53 $\frac{1}{4}$
Fifth	Randolph	2	128,954	1,837	70	1.57
Fifth	Taylor	4	298,222	2,595	115	1.55
Fifth	Tucker	7	938,304	15,648	60	2.00
	Totals	176	12,063,473	158,309	76	1.80

CHAPTER XI.

STRIKES AT THE COAL MINES.

No general strike was had in the State during the year.

The strikes during the year were of short duration and were the result of the operators refusing to grant demands made by the miners for an eight hour day, recognition of organized labor, and in two cases the result of wage differences.

For details of the strikes the table following will furnish the facts.

COUNTY.	NAME OF MINE.	total employ- ers before strike or lock out.	total employ- ers or strikers locked out.	total employ- ers for whom strikes were undertaken.	total employ- ers thrown out of employ- ment by strike, or L. O.	Beginning	Termination	Were works closed in con- sequence.	Length of time closed (working days).	Cause or Object of Strike.	How was Strike Settled.	Loss to employ- ers.	Loss to Operators.
Hancock.....	Marquet No. 1.....	30	30	1	30	Nov. 23, 1900.	Dec. 8, 1900.....	Yes	12	To insist upon employment of men after contract had expired.....	Called off.....	\$.....	\$.....
"	Marquet No. 2.....	26	26	1	26	Nov. 23, 1900.	Dec. 8, 1900.....	Yes	12	"	"	"	"
"	Marquet No. 1.....	27	27	1	27	Apr. 16, 1901.	June 30, 1901.....	Yes	75	"	"	"	"
"	Marquet No. 2.....	28	28	1	28	Apr. 16, 1901.	June 30, 1901.....	Yes	75	To enforce Hook's Val. scale	Still in force.....	"	"
Marshall.....	Moundsv. Sh'ft Glendale shaft.....	120 115	110 115	10	115	Apr. 15, 1901.	June 20, 1901.....	Yes	30	For 8 hour day.....	9½ hour day.....	3,500	1,500
"	Wheeling.....	38	38	38	38	Apr. 20, 1901.	June 10, 1901.....	Yes	35	Disagreement in East Ohio	"	5,000	3,400
"	Richland.....	50	50	50	50	Apr. 21, 1901.	June 7, 1901.....	Yes	40	"	Went back as before.....	5,000	3,400
"	Elm Grove.....	115	112	112	112	Apr. 22, 1901.	May 24, 1901.....	Yes	30	"	Went back at same wages and time.....	400	250
Kanawha.....	Coalb'g No. 4.....	81	80	80	80	Jan. 1, 1901.	Jan. 14, 1901.....	Yes	11	Refusal of management to recognize United Mine Workers.....	Went back wit- out recog'n. Advance of 5c. p r ton.....	1,200	800
Fayette.....	Dunloop No. 1.....	95	95	95	95	Apr. 1, 1901.	Apr. 15, 1901.....	Yes	12	For 10c. advance for mining	"	5,600	500
"	Dunloop No. 2.....	110	110	110	110	Apr. 1, 1901.	Apr. 15, 1901.....	Yes	12	"	"	6,000	550
Mingo.....	Lick Fork.....	150	150	150	150	Feb. 25, 1901.	Mar. 29, 1901.....	Yes	30	Recognition of union.....	Yes with non-union men.....	"	"
"	Chacker.....	150	150	150	150	Mar. 11, 1901.	Apr. 23, 1901.....	Yes	39	Asked discharge of non-union men.....	"	"	"
"	Maritime.....	100	100	100	100	Mar. 23, 1901.	June 1, 1901.....	Yes	60	Recognition of union.....	"	10,000	2,000
Preston.....	Gorman.....	30	30	30	30	Mar. 23, 1901.	June 1, 1901.....	Yes	60	Unruly miners.....	Started up with new miners.....	"	"
Taylor.....	Flemington.....	300	250	250	250	July 3, 1900.	Sept. 1, 1900.....	Yes	50	Cut in wages.....	By compromise.....	"	"
"	Tycornell.....	110	110	110	110	May 1, 1901.	May 15, 1901.....	Yes	12	Dis-ference about loading pit cars.....	Compromised.....	"	"

CHAPTER XII.

SUMMARY OF THE MEN EMPLOYED AT THE MINES AND COKE OVENS BY COUNTIES FOR THE YEAR ENDING JUNE 30, 1904.

DISTRICT.	NAME OF COUNTY.	No. of Mines.	No. of Coke Plants.	Days Mines were Worked.	Days Ovens were Worked.	Men Employed.					On Coke Ovens.	Total No. Men Employ- ed.
						Pick Miners.	Ma- chine Miners.	Ma- chine runners & help- ers.	Others inside of Mines.	Out- side Day Hands.		
First.....	Brooke.....	4	282	100	18	18	136
First.....	Hancock.....	3	162	43	13	13	69
First.....	Harrison.....	36	5	209	74	716	404	108	281	280	6	1,795
First.....	Marion.....	20	9	260	210	1,174	580	98	544	385	142	2,923
First.....	Marshall.....	4	290	148	7	51	36	322
First.....	Monongalia.....	2	2	211	140	165	17	12	12	106
First.....	Ohio.....	7	210	157	29	15	201
Second.....	Kanawha.....	59	2	211	247	1,444	622	167	661	352	37	3,583
Second.....	Mason.....	8	242	198	32	32	262
Second.....	Putnam.....	3	33	201	330	23	6	110	110	579
Third.....	Fayette.....	6	1	231	240	4,855	599	239	1,634	834	878	9,039
Third.....	Raleigh.....	6	1	127	201	45	10	89	21	366
Fourth.....	McDowell.....	42	29	259	283	2,838	84	17	1,130	161	1,581	6,311
Fourth.....	Mercer.....	13	7	244	292	802	318	167	337	1,624
Fourth.....	Mingo.....	12	266	655	349	22	216	172	1,414
Fifth.....	Barbour.....	7	2	224	270	127	165	29	83	80	9	493
Fifth.....	Grant.....	1
Fifth.....	Mineral.....	8	238	496	13	2	68	79	658
Fifth.....	Preston.....	11	2	207	130	356	92	14	56	45	20	583
Fifth.....	Randolph.....	8	1	213	228	126	30	20	50	25	8	259
Fifth.....	Taylor.....	7	1	224	401	100	80	107	78	694
Fifth.....	Tucker.....	9	6	227	229	777	30	4	210	52	196	1,269
Totals.....		365	98	225 Avg.	235	16,009	3,211	756	5,717	3,467	3,226	32,386

MEN EMPLOYED, BY COUNTIES, FOR THE YEAR ENDING JUNE 30, 1901.

DISTRICT.	COUNTY.	EMPLOYEES					Total number men employed	
		Inside.		Outside.		Total.		
		Miners.	Laborers.	Total.	Laborers.			Coke Work ers.
First.....	Brooke.....	100	18	118	18	18	126
First.....	Hancock.....	43	13	56	13	13	69
First.....	Harrison.....	1,120	389	1,509	280	6	286	1,795
First.....	Marion.....	1,754	612	2,366	385	142	527	2,923
First.....	Marshall.....	223	63	286	36	36	322
First.....	Monongalia.....	65	17	82	12	12	24	106
First.....	Ohio.....	157	29	186	15	15	201
Second.....	Kanawha.....	2,066	828	2,894	352	37	389	3,283
Second.....	Mason.....	198	32	230	32	32	262
Second.....	Putnam.....	353	116	469	110	110	579
Third.....	Payette.....	5,451	1,873	7,327	834	878	1,712	9,039
Third.....	Raleigh.....	246	99	345	21	21	366
Fourth.....	McDowell.....	2,922	1,147	4,069	661	1,581	2,242	6,311
Fourth.....	Mercer.....	802	318	1,120	167	337	1,624	1,624
Fourth.....	Mingo.....	1,004	238	1,242	172	172	1,414
Fifth.....	Barbour.....	292	112	404	80	9	89	493
Fifth.....	Grant.....
Fifth.....	Mineral.....	509	70	579	79	79	658
Fifth.....	Preston.....	448	70	518	45	20	65	583
Fifth.....	Randolph.....	156	70	226	25	8	33	259
Fifth.....	Taylor.....	501	115	616	78	78	691
Fifth.....	Tucker.....	807	214	1,021	52	196	1,269	1,269
	Totals.....	19,240	6,473	25,693	3,467	3,226	6,693	32,386

DETAIL OF MEN EMPLOYED AT THE MINES FOR THE YEAR ENDING JUNE 30th, 1901.

NAME OF MINE.	NAME OF COMPANY.	Empl' yes					No. Days Mined were op- erated.	No. Days Ovens were op- erated.	Avg. No. Ovens operated	No. mules, horses inside.	
		Inside.		Outside.							
		Pick Miners.	Ma- chine Miners.	Ma- chine Runners & help'rs	La- bor- ers.	Total.					Coke Work- ers.
<i>Brooke County.</i>											
Blanche.....	Par-handle Coal Co.....	30			8	38	5		303		4
Gilbrist.....	Gilchrist C. Co.....	35			4	39	7		250		4
Wellsburg.....	J. W. M. Carmichael.....	21			3	24	4		300		3
Big Four.....	Brown C. Co.....	14			3	17	2		290		2
Totals.....		100			18	118	18		Avg. 282		13
<i>Hancock County.</i>											
Marquet No. 1.....	Marquet C. Co.....	6			5	21	6		191		3
Marquet No. 2.....	Marquet C. Co.....	19			5	24	4		180		3
Porter No. 1 & 2.....	Cullen & Wern.....	8			3	11	3		50		3
Totals.....		43			13	56	13		Avg. 162		9
<i>Harrison County.</i>											
Worthington No. 2.....	Worthington C. & C. Co.....	25	28	10	5	68	5		244		12
Farnum.....	Globe C. & C. Co.....	20			6	26	4		167	4	24
Pk No. 1 & 2.....	Finnicknick C. & C. Co.....	50	100	8	10	168	10		225		23
Farnum.....	Briar Hill C. & C. Co.....	36			18	54	10	6	240	150	12
Solon.....	Briar Hill C. & C. Co.....		22		6	40	8		225		4
Gypsy Plant.....	Briar Hill C. & C. Co.....	2	60		18	116	48		241		29
Viropia.....	Briar Hill C. & C. Co.....	2	28		3	47	14		250		9
Glen Falls.....	Briar Hill C. & C. Co.....		26		8	20	54		204		13
Dunham.....	Briar Hill C. & C. Co.....	38			14	52	12		200		17
Enterprise.....	Briar Hill C. & C. Co.....	110			30	140	32		278		5
Howard.....	Howard C. & C. Co.....	40			16	56	7		200		9
Depard No. 2.....	Depard Gas C. Co.....	30			13	43	6		163		4
West Fork.....	West Fork Mining Co.....	30			6	36	4		305		4
Farmore.....	Fairmont & Baltimore C. & C. Co.	75			10	85	10		250		10
Lynch.....	Hutchinson C. Co.....	30			3	33	3		240		2
Dolan or No. 2.....	Hutchinson C. Co.....	35			3	38	4		241		2
Ehlen.....	Hutchinson Ehlen C. Co.....	20			4	24	8		80		8
Ocean.....	Highland C. & C. Co.....	10	15	8	12	45	12		200		5
Columbia.....	Highland C. & C. Co.....		22	6	14	42	18		265		8
Riverdale.....	Riverdale Mining Co.....	60			11	71	8		245		5
Kierdale.....	Meadow Brook C. & C. Co.....	45			5	90	5		150		5
O'Neil No. 1.....	O'Neil C. & C. Co.....	30			6	30	9		90		4
O'Neil No. 2.....	O'Neil C. & C. Co.....		30		6	30	9		90		4
Two Lick Run.....	Two Lick Run C. Co.....		9	2	1	12	2				1

Harrison County—Continued.

	14	101	108	251	1,599	280	6	286	Avg. 209	Avg. 74	Avg. 20	217
Cook.....	1			2	16	2		2	150			1
Interstate C. & C. Co.....	1			1	6	18		18				1
Pursglove Bros. C. Co.....	6			2	8				20			2
Dixie.....	10			1	11	3		3	20			1
Perry C. & C. Co.....	8				3				1			
Totals.....	716	101	108	251	1,599	280	6	286	Avg. 209	Avg. 74	Avg. 20	217
<i>Marion County.</i>												
West Fairm't shaft.....	100	20	8	50	178	25		25	365			31
New England.....	120	40	15	80	255	55	18	73	285	40	6	59
Gaston.....	125			40	165	35	25	60	290	180	35	21
Montana C. & C. Co.....	170	15	4	75	264	45	35	80	313	106	106	30
Aurora.....	11			7	21			5	178			5
Mason C. & C. Co.....	25			3	28		5	10	240	120	20	4
Luther.....	14	65	12	35	136	30	30	30	275			18
Murray.....	68			10	78	8	12	20	200	240	41	8
Briar Hill C. & C. Co.....	35			6	11				230			5
King.....	230	310	28	101	669	75	35	110	225	150	90	47
Monongah Co.....	20	15	15	30	110	25		25	240			18
Highland C. & C. Co.....	5	55	10	35	105	30	30	30	245			24
Cheslon.....	80			20	100	15		15	245			17
Highland.....	65			12	77			8	240		12	7
Pennols C. & C. Co.....	75			10	85	12	12	24	274	112	30	7
Worthington C. & C. Co.....	28			10	38	4		4	172			5
Palatine C. Co.....		30	6	20	56	8		8	270			
George's Creek Coal & Iron Co.....	1,174	580	98	544	2,396	385	142	527	Avg. 200	Avg. 210	Avg. 60	313
<i>Marshall County.</i>												
Boggs Run.....	40			12	52	7		7	267			6
Benwood.....	28			9	37	7		7				7
Glendale.....		75	12	16	108	12		12	325			7
Moundsville C. & C. Co.....	80			14	94	10		10	275			13
Totals.....	148	75	12	51	286	36		36	Avg. 290			33
<i>Monongalia County.</i>												
Marietta C. & C. Co.....	35			2	37	5		5	208		idle	6
Briar Hill C. & C. Co.....	30			15	45	7	12	19	214	140	24	11
Totals.....	65			17	82	12	12	24	Avg. 211	Avg. 140	Avg. 24	17
<i>Ohio County.</i>												
T. E. Kasey & Son.....	15			5	20	3		3	250			5
Richland Coal Works.....	40			7	47	5		5	200			6
Elm Grove Shaft.....	60			9	69	6		6	231			5
Manchester.....	30			4	12				320			6
Wheeling Steam C. Co.....	8			2	33				130			2

[illegible]

DETAIL OF MEN EMPLOYED AT THE MINES FOR THE YEAR ENDING JUNE 30, 1901—Continued.

NAME OF MINE.	NAME OF COMPANY.										Employees.			No. Days mines were op- erated.	No. Days ovens were op- erated.	Avg. No ovens opera- ted.	No. mules inside.
	Inside.			Total.			Outside.		Total.	Labor- ers.	Coke Work- ers.						
	Pick Miners.	Ma- chine Miners.	Machine run'rs & Helpers	La- bor'rs.	Total.	Labor- ers.	Coke Work- ers.										
Fayette County.—Continued.																	
Excelsior.....	Mt. Carbon Co. Ltd.....	11	6	2	5	24	6	6	151	3				
Guley.....	Mt. Carbon Co. Ltd.....	103	12	3	29	147	16	57	73	210	312	138	32				
Digby.....	Gt. Kanawha Colliery Co. Ltd.....	39	11	6	21	77	6	6	234	11				
No. 1.....	Gt. Kanawha Colliery Co. Ltd.....	33	2	9	50	114	10	33	43	255	300	45	20				
No. 5 Block.....	Gt. Kanawha Colliery Co. Ltd.....	19	3	4	26	2	2	219	3				
Guley Mt.....	Gauley Mountain C. Co.....	175	41	22	85	326	57	41	101	300	365	110	47				
Gaymont.....	D. S. Cook & Son C. & C. Co.....	50	6	56	6	8	14	200	100	13	5				
Sunnyside.....	Victoria C. & C. Co.....	30	7	37	6	6	240	8				
Elmo.....	New River Mining Co.....	12	15	8	20	53	10	10	7	225	10				
Michigan.....	Michigan C. Co.....	50	12	62	7	7	225	9				
Kaymore & Fayette.....	Low Moor Iron Co.....	5	12	10	25	52	10	10	10	240	10				
Nuttallburg.....	Nuttallburg C. & C. Co.....	45	12	4	20	81	9	14	23	226	365	48	22				
Newlyn.....	Newlyn C. & C. Co.....	25	3	28	2	2	90	2				
Keeny's Creek.....	Nuttallburg C. & C. Co.....	45	11	56	5	5	244	15				
Brown.....	Brown C. Co.....	80	16	96	8	8	246	10				
Roone.....	Roone C. & C. Co.....	60	9	69	5	5	225	10				
Ballinger No. 1.....	Ballinger C. & C. Co.....	61	11	72	8	8	247	10				
Ballinger No. 2.....	Ballinger C. & C. Co.....	11	72	8	8	247	10				
Blume.....	Blume C. & C. Co.....	29	7	36	5	5	253	8				
Blume.....	Blume C. & C. Co.....	100	15	115	5	5	200	18				
Iookout.....	Blume C. & C. Co.....	15	3	18	1	1	150	3				
Smokeless.....	Smokeless C. & C. Co.....	60	15	75	6	6	170	9				
Dubree.....	Rothwell C. & C. Co.....	25	3	28	3	3	178	5				
Quarrier.....	Rothwell C. & C. Co.....	35	9	44	5	5	172	4				
North Caperton.....	Victoria C. & C. Co.....	60	10	70	6	28	31	200	120	127	9				
South Caperton.....	Victoria C. & C. Co.....	90	18	112	9	9	210	15				
Chapman.....	Chapman C. & C. Co.....	8	2	2	4	31	15	15	60	3	3				
Cliff Top.....	Longdale Iron Co.....	100	10	12	4	124	60	61	124	300	16	198	16				
Conard.....	Conard C. Co.....	57	9	109	57	5	179	6				
Brooklyn.....	Brooklyn C. Co.....	37	20	57	8	8	223	11				
Fire Creek.....	Fire Creek C. & C. Co.....	28	20	10	25	83	11	23	34	215	210	64	12				
Central.....	Central C. & C. Co.....	80	16	96	12	25	37	215	90	25	13				
Echo.....	Echo C. & C. Co.....	125	30	95	12	12	12	210	200	48	20				
Rush Run.....	Rush Run C. & C. Co.....	80	20	10	25	150	10	10	10	200	200	92	24				
Red Ash.....	Red Ash C. Co.....	40	35	18	45	138	22	36	56	223	176	78	18				
Thurmond.....	Thurmond C. Co.....	110	20	130	9	13	9	239	12				
Stone Cliff.....	Beury C. & C. Co.....	56	17	73	3	10	13	225	200	40	14				
Big Bend.....	Big Bend C. Co.....	50	20	70	5	5	230	11				
Beckwood & Keystone.....	Beckwood C. & C. Co.....	125	30	155	6	8	14	216	365	28	18				
Alaska.....	Alaska C. & C. Co.....	85	18	103	13	13	210	Idle	20				

<i>Fayette County—Continued.</i>									
Slater.....	being	opened	5	40	7	7	300	4
New River Colliery Co.....	200	30	20	10	30	175	160	20
Ephraim Cr.....	100	30	130	11	194	20
Harvey C. & C. Co.....	200	200	400	25	75	220	265	30
Star C. & C. Co.....	160	40	20	10	30	233	30	30
Collins Colliery Co.....	60	60	205	20
Sun C. & C. Co.....	70	40	110	203	15
Dunn Loop No. 1.....	110	10	150	10	30	250	10	10
Dunn Loop No. 2.....	125	100	200	60	50	255	313	40
Turkey Knob.....	10	4	110	25	276	25
Macdonald Colliery Co.....	being	opened
Sugar Creek.....	10	13	75	10	212	11
Carle & Bra g Hill.....	60	30	180	20	50	270	270	18
Derrydale.....	130	270	8
McKell C. & C. Co.....	20	6	26	4	240	6
Quinnimont C. Co.....	25	12	87	8	216	8
Robins C. Co.....	225	40	265	25	8	225	150	39
Laurel Creek C. Co.....	12	18	36	10	28	275	300	50
Greenwood C. Co.....	6	10	12	250	idle	8
Carbon C. & C. Co.....	150	50	17	77	12	30	250	40
National.....	20	100	35	285	5	2
W. P. Rend.....	4,855	599	1,634	7,327	834	878	Avg. 231	Avg. 240	1,063
Bell Creek.....	239
Totals.....									
Royal.....	90	26	116	5	211	idle	18
Wright.....	70	7	77	6	60	6
Raleigh C. & C. Co.....	17	4	44	116	6	89	20
Stonewall.....	24	12	36	4
Lanark.....	being	opened
Totals.....									
.....	201	4	89	345	21	Avg. 127	11
<i>McDonnell County.</i>									
Tidewater.....	73	52	125	9	40	246	287	12
Bottom Creek.....	60	30	90	20	25	212	212	60
Peerless C. & C. Co.....	75	7	35	121	15	55	70	212	70
Empire.....	40	35	75	10	40	285	101	15
Shawnee C. & C. Co.....	60	30	90	15	25	225	225	100
Eureka C. & C. Co.....	70	60	130	10	50	230	30	75
Pulaski.....	125	20	25	172	10	40	157	300	15
Keystone C. & C. Co.....	80	55	135	15	45	201	300	20
Alkoma C. & C. Co.....	108	85	193	40	50	260	365	80
Gillian.....	65	30	85	24	67	251	173	140
Rolle C. & C. Co.....	85	25	110	15	36	250	240	70
Ronanoke.....	70	25	110	15	45	215	313	80
Indian Ridge.....	70	30	100	15	50	240	365	100
Arlington C. & C. Co.....	65	18	88	12	30	180	180	65
Greenbrier.....	75	25	90	25	26	260	300	81
Greenbrier C. & C. Co.....	75	20	95	20	30	170	300	85

DETAIL OF MEN EMPLOYED AT THE MINES FOR THE YEAR ENDING JUNE 30th, 1901.

[illegible]

DETAIL OF MEN EMPLOYED AT THE MINES FOR THE YEAR ENDING JUNE 30th, 1901.

NAME OF MINE.	NAME OF COMPANY.	EMPLOYEES					No. Days Mines were operated	No. Days Ovens were operated	Avg. No. Ovens operated	No. Men inside	
		Inside.		Outside.		Total.					
		Pick Miners	Ma- chine Miners	La- bor's	Total.						
<i>Preston County—Continued.</i>											
Gorman & West End.	Gorman C. & C. Co.	46	6	52	3	3
Irona.	Irona C. Co.	42	22	4	10	78	10	8
Tunnelton.	Merchants C. Co.	90	70	10	9	179	10	24
Oakland.	Oakland C. & C. Co.	15	4	19	3	3
Lovesville No 1.	Kingwood C. Co.	6	4	10	2	2
Dixie.	Hite C. & C. Co.	14	3	17	1	1
Vulcan.	Orr C. & C. Co.	30	3	33	2	2
Imperial.	Imperial C. & C. Co.	23	1	24	6	3
Totals.		356	92	14	56	518	45	20	65	Avg. 207	Avg. 120
<i>Randolph County.</i>											
Randolph.	F. P. Rease	60	7	67	7
Harding.	Junior C. Co.	60	8	68	7	6
Weaver.	Maryland Smokeless C. Co.	6	30	20	35	91	18	9
Totals.		126	30	20	50	226	25	8	33	Avg. 213	Avg. 36
<i>Taylor County</i>											
Sandlick.	Grafton C. & C. Co.	49	9	58	12	5
Flemington.	Fleming C. & C. Co.	100	100	8	50	258	30	30
Tyrconnell.	Colonial C. & C. Co.	80	20	100	10	idle 20	6
Foster.	B. F. Riddabaugh & Co.	12	3	15	2	2
New York.	Davis C. & C. Co.	90	12	102	10	15
Rosemont.	Rosemont C. Co.	70	13	83	14	11
Totals.		401	100	8	107	616	78	78	Avg. 224	69
<i>Tucker County.</i>											
Douglas.	Cumberland C. Co.	90	40	130	5	22	27	240	20
Thomas Drift.	W. Va. C. & Pits. Ry. M. Dept.	357	50	407	13	31	47	197	27
Thomas No 3.	W. Va. C. & Pits. Ry. M. Dept.	100	33	133	9	9	249	14
Thomas No 1.	W. Va. C. & Pits. Ry. M. Dept.	30	4	4	38	1	1	272	2
Coketon No. 1.	W. Va. C. & Pits. Ry. M. Dept.	35	16	51	2	3	158	5
Coketon No. 2.	W. Va. C. & Pits. Ry. M. Dept.	80	30	110	12	50	62	178	15
Coketon No. 3.	W. Va. C. & Pits. Ry. M. Dept.	115	37	152	9	90	99	258	16
Totals.		777	30	4	210	1,021	52	156	248	Avg. 227	Avg. 110

*SUMMARY OF THE NUMBER OF MEN EMPLOYED, KINDS OF VENTILATION, ETC., BY COUNTIES,
FOR THE YEAR ENDING JUNE 30, 1901.*

DISTRICT.	COUNTY.	No. Mines O- rated.	No. Pick Miners employed.	No. Machine runners.	Other inside employees.	No. (coke em- ployes.	Other outside employees.	Total inside employees.	Total outside employees.	Total No. men employed.	No. coke plants operated.	No. of Fans.	No. of Furnaces.	No. of Natural Ventilation.	Air Shafts, Bas- kers, Hot Air, etc.
First.....	Brooke.....	4	100	18	18	118	18	136	4
First.....	Hancock.....	3	43	13	13	56	13	69	2
First.....	Harrison.....	36	716	512	281	6	280	1,509	286	1,795	3	18	9
First.....	Marion.....	20	1,174	678	544	142	385	2,306	527	2,923	9	18	1
First.....	Marshall.....	4	148	87	51	36	286	36	322	3	1
First.....	Monongalia.....	12	65	17	12	12	82	21	106	2	1
First.....	Ohio.....	157	1,444	15	15	186	15	201	4
Second.....	Kanawha.....	59	1,444	789	661	37	352	2,894	389	3,283
Second.....	Mason.....	8	198	32	32	230	32	262	13
Se ond.....	Putnam.....	3	330	20	110	110	469	110	579	4
Third.....	Fayette.....	100	4,855	838	1,634	578	834	7,327	1,712	9,039	33	43	2
Fourth.....	Calveigh.....	6	201	55	89	21	345	21	366	18
Fourth.....	McDowell.....	42	2,838	101	1,130	1,381	661	4,069	2,242	6,311	29	31	1
Fourth.....	Meyer.....	13	802	318	337	107	1,120	504	1,624	7
Fifth.....	Mingo.....	12	658	371	216	172	1,242	172	1,414
Fifth.....	Barbour.....	7	127	194	83	9	80	404	89	493	2	4	3
Fifth.....	Grant.....	1
Fifth.....	Mineral.....	8	496	15	68	79	579	79	658
Fifth.....	Preston.....	11	353	106	56	20	45	518	65	583	2	5	1
Fifth.....	Randolph.....	3	126	50	50	8	25	226	33	259
Fifth.....	Taylor.....	7	401	108	107	78	694	78	694	1	1
Fifth.....	Tucker.....	9	777	34	210	196	52	1,021	248	1,269	6	6	4
Totals.....		363	16,000	3,467	5,117	3,226	3,407	25,693	6,693	32,386	98	173	99	42	8

SUMMARY OF THE TABLES GIVING NUMBER OF EMPLOYEES, MEN KILLED AND INJURED, OVENS,
DAYS MINES AND OVENS WORKED AND ACRES WORKED OUT FOR THE YEAR
ENDING JUNE 30, 1901.

DISTRICT.	COUNTY.	EMPLOYEES.						No. men injured.	No. men killed.	No. mules and horses.	Total t. o. of coke ovens.	No. days mines were operated.	No. days ovens were operated.	Acres of coal worked out.	
		Inside.		Outside.		Sum Total.									
		Miners.	Laborers.	Total.	La- bor- ers.		Coke work- ers.								Total.
First.	Brooke	100	18	118	18	18	136	136	13	282	10.85		
First.	Hancock	43	13	56	13	13	69	69	9	162	5.07		
First.	Harrison	1,120	389	1,509	280	6	1,785	1,785	217	731	209	209	74		
First.	Marion	1,754	642	2,396	385	142	2,923	2,923	313	931	260	260	210		
First.	Marshall	223	63	286	36	322	322	33	290	34.69		
First.	Monongalia	65	17	82	12	12	106	106	33	66	211	140	140		
First.	Ohio	157	29	186	15	201	201	17	17	210	18.91		
Second.	Kanawha	2,066	828	2,897	352	37	3,283	3,283	19	6	211	247	247		
Second.	Mason	198	32	230	32	262	262	34	212	16.10		
Second.	Fayette	353	116	469	110	579	579	75	201	18.65		
Third.	Fayette	5,454	1,873	7,327	834	878	9,039	9,039	37	1,063	2728	231	240		
Third.	Raleigh	216	69	345	21	365	365	1	44	127	21.10		
Fourth.	Mohowell	2,922	1,117	4,069	661	1,581	6,311	6,311	41	31	259	259	293		
Fourth.	Meer	802	318	1,120	167	337	501	1,624	10	124	241	241	292		
Fourth.	Mingo	1,004	238	1,242	172	1,414	1,414	15	5	266	71.73		
Fifth.	Barboar	232	112	401	80	9	483	483	3	15	221	270	28.91		
Fifth.	Grant		
Fifth.	Mineral	509	70	579	79	658	658	59	238	44.52		
Fifth.	Preston	448	70	518	45	20	583	583	1	2	188	120	75.50		
Fifth.	Randolph	156	70	226	25	8	259	259	3	213	228	14.50		
Fifth.	Taylor	901	115	616	78	694	694	2	69	224	224	42.53		
Fifth.	Tucker	807	214	1,021	52	196	1,269	1,269	1	99	274	229	166.80		
Totals.	Totals.	19,240	6,473	25,693	3,467	3,226	32,386	32,386	130	3,325	10,424	10,424	2851.56		

PART II. ACCIDENTS.

CHAPTER XII.

ACCIDENTS, SUMMARY.

During the year one hundred and thirty were killed and one hundred and eighty were non-fatally injured within and about the mines.

The number killed is eleven less and the number injured is four less than during the previous year.

There were two disasters during the year in which twenty-five lives were lost,—one at the Berryburg and the other at the Farmington or Chatham Shaft. Details of these disasters are fully treated in chapter XIV.

Falls of roof and coal were responsible for the death of 76 and the injury of 76 persons, or 48.8 per cent. of all accidents.

Explosions of gas killed 10 and injured 6, or 4.8 per cent. of all accidents.

Explosions of powder smoke killed 15 and injured 2, or 5.5 per cent. of all accidents.

The mine cars killed 16 and injured 38, or 17.4 per cent. of all accidents. Powder explosions and run-away cars on incline each killed 4 persons.

A number of small explosions were had within the mines in different parts of the State. in Chapter XIV will be found a list of all explosions.

Carelessness and a disregard to orders are the principal causes of all accidents at the mines.

In each mine will always be found some employes who do not fully appreciate the extreme danger of explosives and combustible gases, and so long as we have such people we will have disasters in which will be sacrificed the lives of the most careful employes.

1900-1901.

TABLE EXHIBITING THE CAUSES OF FATAL AND NON-FATAL ACCIDENTS AND THE NUMBER AND PERCENTAGE FROM EACH CAUSE.

CAUSE.	Fatal.	Non-Fatal.	Total.	Per cent.
Falls of slate	64	56	120	38.7
Falls of coal	7	11	18	5.8
Falls of coal and slate	2	4	6	1.9
Falls of dirt and slate	1	..	1	.3
Falls on Tops	1	1	2	.6
Falls of sandstone ..	1	2	3	.9
Loose coal	2	2	.6
Explosion of powder smoke	15	2	17	5.5
Explosion of powder ..	4	11	15	4.8
Explosion of gas	10	6	16	5.2
Explosion of dust and smoke	3	3	.9
Blownout shot	1	1	.3
Premature explosion	1	1	.3
Shot blazed out	2	2	.6
Mine locomotive ..	1	2	3	.9
Mine cars	16	38	54	17.4
Mine machine	1	9	10	3.2
Motor	2	2	.6
Railroad cars	1	1	.3
Haulage rope	1	1	.3
Kicked by horse	1	1	.3
Mule	1	5	6	1.9
Fell over feed box	1	1	.3
Blow-off pipe	1	1	.3
Water-box	1	1	.3
Incline rope	2	2	.6
Runaway cars on incline ..	4	2	6	1.9
Timbers fell	2	2	.6
Drill	1	1	.3
Shaft band	1	1	.3
Fell while running	1	1	.3
Fall of muck	1	1	.3
Burned by lamp	1	..	1	.3
Fell into shaft ..	1	..	1	.3
Totals ..	130	180	310	100.0

TABLE SHOWING THE NUMBER OF FATAL AND NON-FATAL ACCIDENTS, THEIR CAUSES, ETC.,
IN THE STATE, BY COUNTIES, 1900-1901.

(F. means Fatal; N. F. means Non-Fatal.)

COUNTY.	Falls of slate.		Falls of coal.		Falls of coal & slate.		Falls of dirt & slate.		Falls of top.		Falls of sand-stone.		Loose coal.		Explosion of der smoke.		Explosion of powder.		Explosion of gas.		Extlosion of dust & smoke.		Blown-out shot.		Premature explosion.		Shot blazed out.		Mine loco-motive.		Mine cars.		Mine machine.		Motor.	
	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.	F.	N. F.
Harrison.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Marion.....	2	5	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Marshall.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Monongalia.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ohio.....	3	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Kanawha.....	20	12	1	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mason.....	33	21	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Fayette.....	3	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Raleigh.....	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
McDowell.....	3	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mercer.....	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mingo.....	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Barbour.....	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Preston.....	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Randolph.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Taylor.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Tucker.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Totals.....	64	56	7	11	2	4	1	1	1	1	1	1	2	2	15	2	4	11	10	6	3	7	1	1	2	1	2	16	38	1	9	2	2	2	2	2

AGES OF PERSONS KILLED OR INJURED—1900-1901.

	AGES.	<i>Fatal.</i>	<i>Non-Fatal.</i>
12 years	2
13 years	3
14 years	..	1	6
15 years	..	2	1
16 years	..	1	2
17 years	..	3	5
18 years	..	3	2
19 years	..	2	6
20 years	..	4	14
20 to 25 years	..	26	43
25 to 30 years	..	20	26
30 to 35 years	..	12	15
35 to 40 years	..	10	15
40 to 45 years	..	7	20
45 to 50 years	..	3	5
50 to 55 years	..	1	..
55 to 60 years	..	2	3
60 to 65 years	..	3	..
Unknown	..	29	19
Totals	..	130	180

YEARS OF EXPERIENCE OF PERSONS KILLED OR INJURED.

1900--1901.

	YEARS OF EXPERIENCE.	<i>Fatal.</i>	<i>Non-Fatal.</i>
3 months or less	..	18	34
3 to 6 months	..	6	13
6 to 12 months	..	13	20
2 years	..	8	16
3 years	..	4	6
4 years	..	4	7
5 years	..	2	9
6 years	..	3	10
7 years	..	2	2
8 years	..	4	5
9 years	3
10 years	..	6	1
10 to 15 years	..	7	8
15 to 20 years	..	3	8
25 years	1
30 years	..	1	2
40 years	..	1	..
50 years	1
Several years	..	6	5
Many years	2
All life	..	3	3
Unknown	..	39	28
Totals	..	130	180

*ACCIDENTS TABULATED ACCORDING TO THE DAYS OF
THE WEEK ON WHICH THEY OCCURRED.*

1900-1901.

Fatal Accidents.

	<i>Sun.</i>	<i>Mon.</i>	<i>Tues.</i>	<i>Wed.</i>	<i>Thurs.</i>	<i>Fri.</i>	<i>Sat.</i>	<i>Totals.</i>
Inside	17	20	31	16	25	9	118
Outside	3	..	2	3	3	1	12
Totals....	..	20	20	33	19	28	10	130

NON-FATAL ACCIDENTS.

	<i>Sun.</i>	<i>Mon.</i>	<i>Tues.</i>	<i>Wed.</i>	<i>Thurs.</i>	<i>Fri.</i>	<i>Sat.</i>	<i>Totals.</i>
Inside	2	29	37	37	26	19	20	170
Outside	1	2	4	..	1	2	10
Totals ..	2	30	39	41	26	20	22	180

SUMMARY, FATAL AND NON-FATAL ACCIDENTS.

	<i>Sun.</i>	<i>Mon.</i>	<i>Tues.</i>	<i>Wed.</i>	<i>Thurs.</i>	<i>Fri.</i>	<i>Sat.</i>	<i>Totals.</i>
Inside	2	46	57	68	42	44	29	288
Outside	4	2	6	3	4	3	22
Totals ..	2	50	59	74	45	48	32	310

NATIONALITY OF PERSONS KILLED OR INJURED—1900-1901.

	<i>NATIONALITY.</i>	<i>Fatal.</i>	<i>Non-Fatal.</i>
American		60	116
Negro.. ..		36	24
Italian		8	16
English		5	3
Scotch		2	1
Irish	1
Welsh	1
Austrian		1	1
Slav		2	3
Hungarian		5	8
Swede	1
Pole	1
German	1
Unknown		11	8
Totals ..		130	180

TABULATED TABLES OF ACCIDENTS.

FATAL ACCIDENTS FOR THE YEAR ENDING JUNE 30, 1901.

No.	CO. N'TY.	Name of Mine.	Name of person killed.	Date of		Nationality.	Length of experience.	Age.	Occupation.	Married or Single.	Widow.	Orphans.	Total No. Dependents.	Insurance and Amount.	How Killed.	Inquest.
				Injury.	Death.											
1	Harrison	Alexander.....	John Jimmie.....	Dec. 10, '00	Dec. 10, '00	Italian	4 mos.	21	Miner	M	1	2	3	25 00	Fall of slate.	No.
2	"	Mt. Clare	F. M. Slaughter	Dec. 22, '00	Dec. 22, '00	American	9 mos.	28	Blacksmith	M	1	2	3	25 00	Miner car (outside)	No.
3	"	Glen Falls.....	William Day	Jan. 31, '01	Jan. 31, '01	Afro-Am.	1 yr.	38	"	M	1	1	2		Caught bet car and rib	"
4	"	Hutchinson No. 2	Geo. McRay	Mar. 21, '01	Mar. 22, '01	American	4 yrs.	21	Driver.	M	1	1	2		Fall of slate.	"
5	"	Pink's No. 1	Robert Miller	Apr. 2, '01	Apr. 2, '01	English	10 yrs.	65	Track laborer	M	1	1	2		" coal	"
6	"	Briar Hill No. 1	John Pileher	Apr. 16, '01	Apr. 16, '01	American	sev. yrs.	27	Miner	M	1	1	2		" slate.	"
7	"	Glen Falls.....	W. H. Yoder	June 12, '00	June 12, '00	American	8 yrs.	33	"	M	1	1	2		"	"
8	Marion	Chifton.....	Casper Komatz	Aug. 28, '00	Aug. 28, '00	Austrian	8 yrs.	33	"	M	1	1	2		"	"
9	"	Chifton.....	Mike Verapa	Nov. 8, '00	Nov. 8, '00	Slav.	13 yrs.	13	"	M	1	1	2		"	"
10	"	Anderson.....	A. S. Leeper	Mar. 11, '01	Mar. 11, '01	American	10 yrs.	38	"	M	1	1	2		"	"
11	"	New England.....	Nike Sukoe	Mar. 23, '01	Mar. 23, '01	American	2 weeks	37	Miner	M	1	1	2		" coal	"
12	"	Montana.....	John Hrunstick	Mar. 30, '01	Mar. 30, '01	Slav.	2 yrs.	27	Miner	M	1	1	2		Fall under mine cars.	"
13	"	Monaghan No. 3	James Pettit	Apr. 18, '01	Apr. 19, '01	Italian	3 mos.	30	"	M	1	1	2		Fall of slate	"
14	"	Chifton	Sam Berrie	Apr. 29, '01	Apr. 29, '01	American	1 yr.	30	"	M	1	1	2		Explosion of gas.	Yes
15	"	Chatham Shaft	Antonio Pugliese	May 15, '01	May 15, '01	Italian	all life	40	"	M	1	1	2		"	"
16	"	"	Mayn'd F. Beatty	May 15, '01	May 15, '01	American	3 mos.	28	Driver.	M	1	1	2		"	"
17	"	"	Gockoro Pugliese	May 15, '01	May 15, '01	American	1 mo.	40	"	M	1	1	2		"	"
18	"	"	Joseph L. Nichols	May 15, '01	May 15, '01	American	3 mos.	28	Miner	M	1	1	2		"	"
19	"	"	Carl R. Hunter	May 15, '01	May 15, '01	"	1	40	"	M	1	1	2		"	"
20	"	"	John H. Everson	May 15, '01	May 15, '01	Italian	3	30	"	M	1	1	2		"	"
21	"	"	John H. Everson	May 15, '01	May 15, '01	"	1	30	"	M	1	1	2		"	"
22	"	"	Brasso Antonio	May 15, '01	May 15, '01	Italian	2	30	"	M	1	1	2		"	"
23	"	"	Dano Alfieri	May 15, '01	May 15, '01	"	2	30	"	M	1	1	2		"	"
24	"	"	Geova'e Venditti	May 15, '01	May 15, '01	American	no. yrs.	70	"	M	1	1	2		"	"
25	Marshall	Benwood Mill	Jeff D. East	May 15, '01	May 15, '01	American	no. yrs.	70	"	M	1	1	2		"	"
26	Onto.	Stockyard	Jonathan Watson	Jan. 12, '01	Jan. 12, '01	"	no. yrs.	70	"	M	1	1	2		Burn on knee gauged	No.
27	Kanawha	Lewisville	Benj. Gonder	Oct. 29, '00	Oct. 29, '00	American	3 mos.	18	"	M	1	1	2		Fall of slate	"
28	"	No. 2, K.C.M.C.	W. B. McOnibay	Nov. 4, '01	Nov. 4, '01	Negro	8	59	"	M	1	1	2		"	"
29	"	"	Louis H. Graves	Jan. 4, '01	Jan. 4, '01	American	12	19	"	M	1	1	2		"	"
30	"	"	Vernon Brown	Jan. 31, '01	Jan. 31, '01	"	15 yrs.	53	"	M	1	1	2		"	"
31	"	Charlmore	John Samples	Feb. 20, '01	Feb. 20, '01	"	sev. yrs.	35	"	M	1	1	2		"	"
32	"	No. 2, K.C.M.C.	Will Cox	Feb. 28, '01	Feb. 28, '01	"	5 yrs.	22	"	M	1	1	2		"	"
33	Fayette	Klondike	Charles Hager	July 5, '00	July 5, '00	Scotch	35	25	"	M	1	1	2		"	"
34	"	No. 1 (W. P. R.)	John McOrnick	July 23, '00	July 23, '00	American	15 yrs.	40	"	M	1	1	2		"	"
35	"	South Nuffall	James Trumm	Aug. 7, '00	Aug. 7, '00	"	2 days	18	"	M	1	1	2		"	"
36	"	No. 2 (W. P. R.)	Geo. Alexander	Aug. 16, '00	Aug. 16, '00	"	1 year.	17	"	M	1	1	2		"	"
37	"	Collins No. 1	David Saddle	Aug. 21, '00	Aug. 21, '00	"	1 year.	17	"	M	1	1	2		"	"
38	"	Echo No. 1	Clarence Wood	Aug. 24, '00	Aug. 24, '00	"	1 year.	17	"	M	1	1	2		"	"
39	"	No. 2, Nova So.	Amory Palne	Sept. 18, '00	Sept. 18, '00	"	1 year.	17	"	M	1	1	2		"	"
40	"	Fire Creek	Wylie Smith	Sept. 18, '00	Sept. 18, '00	"	1 year.	17	"	M	1	1	2		"	"

40	Foyette	Sugar Creek	Jos. Richardson	Oct. 6, '00	Oct. 6, '00	English	20 yrs.	35	Driver	M	1	1	8	50 00	Myles fell on him (ins)	0
41		Dimmock	Samuel Cooper	Oct. 11, '00	Oct. 20, '00	American	8	22	Minor	M					Fell off slate	
42		Blumond	James Nelson	Oct. 17, '00	Oct. 17, '00	American	3	20	Minor	M						
43		Blume No. 2	James Baker	Oct. 24, '00	Oct. 24, '00	American	40	60	Minor	M						
44		No. 2 (W. P. K.)	Clyde Judson	Oct. 27, '00	Oct. 27, '00	American		15	Minor	M						
45		Rush Run	Robert Thaxton	Nov. 12, '00	Nov. 12, '00	Afro-Am		15	Minor	M						
46		Collins No. 2	John Horner	Nov. 30, '00	Nov. 30, '00	American	15	37		M						
47		Crescent No. 5	Morgan Peirce	Dec. 4, '00	Dec. 4, '00	American	10	25		M						
48		No. 1 (G. K. Co.)	Andrew Coleman	Dec. 19, '00	Dec. 19, '00	Afro-Am	30	17	Laborer	M						
49		Ballinger No. 1	O. T. Milan	Dec. 21, '00	Dec. 21, '00	White	10 yrs.	27	Driver	M						
50		Harvey	Chas. Anderson	Jan. 7, '01	Jan. 7, '01	Afro-Am		30	Laborer	M						
51		No. 25, W. J. F. Co.	David W. Warren	Jan. 10, '01	Jan. 10, '01	American	5	24	Driver	M						
52		Macdonald	Geo. Williams	Jan. 18, '01	Jan. 18, '01	Colored	3	33	Minor	M						
53			Caleb Anderson	Jan. 23, '01	Jan. 23, '01	Colored	1	28		M						
54		Collins No. 2	San Nicastro	Feb. 5, '01	Feb. 5, '01	Italian	7	35		M						
55		Brown's S. N.	John Osborn	Mar. 2, '01	Mar. 2, '01	Negro	4	24		M						
56		Collins No. 1	Jas. Irvington	Mar. 12, '01	Mar. 12, '01	American	15	38		M						
57		No. 1 (Gau. Y.M.)	Henry Kelly	Mar. 16, '01	Mar. 17, '01	Colored	3	19		M						
58		Collins	Price Atkins	Mar. 20, '01	Mar. 20, '01	Colored	10	21		M						
59		Greenwood	Horace Harris	Mar. 21, '01	Mar. 21, '01	Colored	3	35		M						
60		Collins	S. J. Meadows	Mar. 25, '01	Mar. 25, '01	American	10	35		M						
61		Fire Creek	Henry Blair	Apr. 3, '01	Apr. 3, '01	Afro-Am	8 mos.	24	Laborer	M						
62		Macdonald	E. W. Morris	Apr. 9, '01	Apr. 9, '01	American	all life	35	Minor	M						
63		Collins No. 1	O. H. Arrington	May 7, '01	May 7, '01	American	6 yrs.	22		M						
64		Macdonald	Caleb Cox	May 14, '01	May 14, '01	Afro-Am	6 yrs.	25		M						
65		Central	F. W. Willis	Jun. 5, '01	June 5, '01	American	sev. yrs	35		M						
66		A. P. Rend	Ed. Strader	Jun. 10, '01	Jun. 10, '01	Afro-Am		53	Coal loader	M						
67		Kluyth	William T. Rule	Jun. 10, '01	Jun. 10, '01	American	1 year	42	Carpeteer	M						
68		Raleigh No. 1	Patent Hobbs	Mar. 27, '01	Mar. 27, '01	American	3 mos.	30	Minor	M						
69		Turkey Gap	E. M. Thurman	July 18, '01	July 18, '01	White	3 yrs.	24		M						
70		Pulaski	Rob. Yancy	July 30, '01	July 30, '01	Colored	3 yrs.	24		M						
71		Algora	Geo. Jones	Aug. 20, '01	Aug. 20, '01	White	3 mos.	24		M						
72		Algora	William English	Aug. 29, '01	Aug. 29, '01	Negro	4 yrs.	25	Slate foreman	M						
73		Turkey Gap	Thos. Watson	Sept. 24, '01	Sept. 24, '01	Colored	1 year	25	Minor	M						
74		Algora No. 1	James A. Lee	Oct. 2, '01	Oct. 2, '01	American	16 mos.	49		M						
75		Algora	James Nagy	Oct. 16, '01	Oct. 16, '01	Hungarian	18 mos.	39		M						
76		Shawnee	John H. Hodge	Oct. 30, '01	Oct. 30, '01	American	13 mos.	26		M						
77		Pulaski	Morris Stone	Nov. 2, '01	Nov. 2, '01	Colored	2 mos.	30		M						
78		Peelstone	Geo. Haslen	Nov. 3, '01	Nov. 3, '01	Colored	1 year	18	Slate man	M						
79		Keystone	Garlad William	Nov. 8, '01	Nov. 8, '01	American	7 mos.	22		M						
80		Bottom Creek	Robert L. Payne	Nov. 13, '01	Nov. 13, '01	American	12 yrs.	35	Track layer	M						
81		Greenbrier	Burt Dingman	Nov. 29, '01	Nov. 29, '01	American	3 yrs.	16	Laborer	M						
82		Lynchburg	Nat. Oley	Nov. 29, '01	Nov. 29, '01	Colored	2 mos.	25	Minor	M						
83		Ashland	Henry Davis	Dec. 4, '01	Dec. 4, '01	Colored	2 yrs.	33		M						
84		Rolfe	Robert Pugh	Jan. 2, '02	Jan. 2, '02	Colored	6	31		M						
85		Powhatan	Robert G. Hayes	Jan. 2, '02	Jan. 2, '02	Colored	3 mos.	25	Minor	M						
86		Shamoku	Charles Lyons	Jan. 22, '02	Jan. 22, '02	American	6	33		M						
87			Edjan Albice	Jan. 22, '02	Jan. 22, '02	American	5 mos.	20	Laborer	M						
88				Jan. 21, '02	Jan. 21, '02	American	5 mos.	20		M						
89				Jan. 21, '02	Jan. 21, '02	American	5 mos.	20		M						

FATAL ACCIDENTS FOR THE YEAR ENDING JUNE 30, 1901. Continued.

No.	COUNTY.	Name of Mine.	Name of Person Killed.	Date of		Nation-ality.	Length of ex-perience.	Age.	Occupation.	Married or Single.	Orphans.	Widow.	Total No. Dependents.	Insurance and Amount.	How Killed.	Inquest.
				Injury.	Death.											
90	McDowell.	Lynchburg....	Geo. H. Moore....	Jan. 30, '01	Jan. 30, '01	American.	3 days.	24	Lab'r & miner	S	1	1	1	...	Fall of slate....	no.
91	"	U-land No. 2....	Robert Davis....	Feb. 4, '01	Feb. 4, '01	"	1 year.	18	"	M	1	1	1	...	Can't bet 2 or 3 (husd) yes	yes
92	"	Turkey Gap....	Thos. Keller....	Feb. 6, '01	Feb. 5, '01	"	"	15	"	M	1	1	1	...	Fall of slate....	no.
93	"	"	John Andre....	Mar. 4, '01	Mar. 4, '01	Hungarian	"	37	"	S	1	1	1	...	Can't bet. car & rib. yes	yes
94	"	Aig ma....	Joseph Vengoin.	Mar. 19, '01	Mar. 19, '01	"	"	26	"	M	1	1	1	...	Fall of slate....	no.
95	"	Powhatan....	Senior Jackson.	Apr. 10, '01	Apr. 10, '01	Colored....	8	40	"	M	1	1	1	...	Fall of slate....	no.
96	"	Houston....	Joe Pepoy....	Apr. 22, '01	Apr. 22, '01	Hungarian	"	42	"	M	1	1	1	...	" coal. yes	yes
97	"	Lick Branch....	Jas. Thompson....	May 2, '01	May 2, '01	American.	4 mos.	25	"	M	1	1	1	...	" " state. yes	yes
98	"	Lick Branch....	M. Cartwright....	May 2, '01	May 2, '01	"	"	22	"	S	1	1	1	...	" " " " no.	no.
99	"	Bottom Creek....	Paul Richardson	May 31, '01	May 8, '01	Colored....	2 wks.	35	Laboref....	M	1	1	1	...	" " " " no.	no.
100	"	McDowell....	Charles Hacker....	May 31, '01	May 31, '01	"	3 yrs.	41	Miner....	M	1	1	1	50.00	" " " " no.	no.
101	"	Caswell....	Sanders Johnson	June 5, '01	June 5, '01	Afro-Am....	"	35	Miner....	M	1	1	1	...	" " " " no.	no.
102	Mercer....	"	J. F. Cyphers....	July 26, '00	July 26, '00	American.	5 mos.	28	Miner....	S	1	1	1	...	Fall of slate....	no.
103	"	Caswell....	Mike Geary....	Oct. 11, '00	Oct. 11, '00	Hungarian	"	22	"	S	1	1	1	...	(husd) bet car & rib. yes	yes
104	"	Booth-Bower....	E. K. Sutherland	Nov. 13, '00	Nov. 13, '00	American.	1 year.	29	"	S	1	1	1	...	Fall of coal....	"
105	"	Fochontas W....	W. McGinnis....	Jan. 25, '01	Jan. 25, '01	Scotch....	17 years	49	"	M	1	1	1	10	Fall of slate....	"
106	"	Buckeye....	D. L. Danely....	Apr. 12, '01	June 3, '01	American.	"	40	"	S	1	1	1	...	" " " " no.	no.
107	Mingo....	Freeport....	Elias Brown....	Aug. 10, '00	Aug. 10, '00	American.	10 years	40	Miner....	M	1	1	1	3	Fall of slate....	no.
108	"	Alma....	Gideon Maber....	Aug. 14, '00	Aug. 14, '00	"	15	30	"	M	1	1	1	...	" " " " yes	yes
109	"	Grapevine....	Ira Mounts....	Apr. 4, '01	Apr. 18, '01	English....	2	21	"	M	1	1	1	...	Explosion of powder	"
110	"	Logan....	G. S. Fugitt....	June 12, '01	June 12, '01	American.	"	26	Brakeman	M	1	1	1	...	" " " " yes	yes
111	"	"	Jas. Shonderly....	June 12, '01	June 12, '01	"	"	28	Miner....	M	1	1	1	...	Explo of po'd smoke yes	yes
112	Barbour....	Berryburg....	Charles Goff....	Nov. 2, '00	Nov. 2, '00	A white....	"	27	"	M	1	1	1	...	" " " " yes	yes
113	"	"	Lewis Pack....	Nov. 2, '00	Nov. 2, '00	"	"	27	"	M	1	1	1	...	" " " " yes	yes
114	"	"	Wm. A. Brown....	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
115	"	"	A. Blackburn....	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
116	"	"	J. A. Rawford....	Nov. 2, '00	Nov. 2, '00	White....	"	27	"	M	1	1	1	...	" " " " yes	yes
117	"	"	Nat. Mosby....	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
118	"	"	Geo. Murphy....	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
119	"	"	Rich'd Johnson	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
120	"	"	Unknown....	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
121	"	"	Unknown....	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
122	"	"	Unknown....	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
123	"	"	Unknown....	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
124	"	"	Unknown....	Nov. 2, '00	Nov. 2, '00	Colored....	"	27	"	M	1	1	1	...	" " " " yes	yes
125	"	"	L. A. Duncan....	Nov. 2, '00	Nov. 2, '00	White....	"	27	"	M	1	1	1	...	" " " " yes	yes
126	"	"	Ollie Marks....	Nov. 2, '00	Nov. 2, '00	White....	"	27	"	M	1	1	1	...	" " " " yes	yes
127	"	"	Joe Jackson....	Nov. 2, '00	Nov. 2, '00	White....	"	27	"	M	1	1	1	...	" " " " yes	yes
128	Preston	Irona....	Alex McCarnick	July 16, '00	July 16, '00	English....	8 years.	24	Miner....	S	1	1	1	...	Fall of slate....	no.
129	"	Newburg....	W. S. Wolfe....	Oct. 1, '00	Oct. 1, '00	"	"	24	"	S	1	1	1	...	" " " " no.	no.

NON-FATAL ACCIDENTS FOR THE YEAR ENDING JUNE 30, 1901.

No.	COUNTY.	Name of Mine	Name of Person Injured.	Date of Accident.	Nationality	Length of experience	Occupation.	Nature of Accident.	Injuries Sustained
1	Harrison ..	Melrose.....	Lurizo Guido.....	Aug. 1, '00	Italian.....	3 mos.....	Miner.....	Fall of slate	Leg broken, 2 fingers crushed and cut.
2	"	Briar Hill No. 5	Harvey Kellar.....	Dec. 12, '00	American.....	6 "	Trip rider.....	Fell under car (inside).....	Left foot cut & one bone broken.
3	"	Gypsy.....	Lawrence Angolot.....	Dec. 17, '00	Italian.....	1 yr.....	Miner.....	Shot blew out.....	Hands and face burned.
4	"	Maulsby.....	N. G. Nize.....	Dec. 20, '00	American.....	1 "	"	Mach. truck ran over foot.....	Fingers mashed.
5	"	No. 7 (B. H.).....	I. L. Armstrong.....	Jan. 11, '01	"	2 "	"	Caught between car & rib.....	Foreshot about body.
6	"	Solon or B.H. No. 9	W. D. Stafford.....	Jan. 13, '01	"	10 or 12y 30	Engineer.....	hand in carbide brushes of generator.....	Hand badly mashed.
7	"	Gypsy.....	Wm. Holbert.....	Mar. 13, '01	"	"	Miner.....	Explosion of powder.....	Painfully burned.
8	"	Gypsy.....	Wm. Maze.....	Mar. 13, '01	"	"	Back-har-d.....	"	"
9	"	Gypsy.....	W. G. Maze.....	Mar. 13, '01	"	"	"	"	"
10	"	Gypsy.....	Geo. Tecms.....	Mar. 13, '01	"	"	"	"	"
11	"	Gypsy.....	A. D. Teams.....	Mar. 13, '01	"	"	"	"	"
12	"	Harb'r or B. H. 7	Joseph Fitchner ..	Mar. 30, '01	Italian.....	4 mos.....	Miner.....	Shot went off while he was examining it.....	Burnt & cut about face, hands & shoulder.
13	"	Columbia	Chas. H. Morrison ..	June 5, '01	American.....	2 "	Rope rider.....	Fell under car.....	Left leg cut.
14	"	Howard	Luigi Schipnaw.....	June 27, '01	Italian	8 "	Miner.....	Carriage exploded.....	Face, arms & legs burned.
15	Marion.....	New England.....	Frank Tedrow.....	Nov. 20, '00	American.....	5 "	Driver.....	Foot caught between cars.....	Foot mashed.
16	"	New England.....	Luigi Romano.....	Nov. 24, '00	Italian.....	11 "	Miner.....	Shot exploded.....	Face burned & bruised.
17	"	New England.....	Ashby Shackelford ..	Jan. 12, '01	American.....	1 "	Coal dumper.....	Caught betw'n bull wheel & floor of tippie.....	Leg cut above ankle.
18	"	New England.....	Antoni Bitondi.....	Jan. 15, '01	Italian.....	7 "	Miner	Fall of slate.....	Leg broken.
19	"	New England.....	James Osborn.....	Jan. 17, '01	American.....	8 "	"	"	Left hand mashed.
20	"	New England.....	Joe Manchene.....	Jan. 19, '01	Italian	6 "	"	"	Right leg broken in two places.
21	"	New England.....	E. P. Malone.....	Jan. 29, '01	American.....	4 yrs.....	Mach. runner.....	Foot caught by machine.....	Right foot mashed.
22	"	New England.....	David L. Bosworth ..	Feb. 9, '01	"	6 mo.....	Carpenter	Caught between box car & chute.....	Left clavicle dislocated & contusion of left side of chest & lungs.
23	"	Murray or B.H. 2	Les. Heston.....	Feb. 21, '01	"	2 "	Mach. helper.....	Caught by tail chain	ankle mashed.
24	"	Murray or B.H. 2	Frank Sprouse.....	Feb. 22, '01	Italian	2 "	laborer.....	Fall of coal.....	Contusion of cheek & nose
25	"	Highland.....	Chas. Tocatchis.....	Mar. 4, '01	slav	1 yr.....	Miner.....	Carriage exploded.....	Left side of face & breast burned.
26	"	New England.....	Riggo Prezzo.....	Mar. 5, '01	Italian	10 mos.....	"	Car ran off, into loaded cars	Collar bone dislocated & shoulder & arm cut.
27	"	New England	Frank Romano.....	Mar. 5, '01	"	1 "	"	"	Puncture in hip.
28	"	New England.....	Racco Pin	Mar. 5, '01	"	3 "	"	"	Hip & shoulder bruised.

29	Marion	New England	Thomas Smith	Mar. 5, '01	Slav.	3 mos.	37	Miner.	Thrown by stepping on rope in motion	Bruised about hip.
30	"	New England	Ed Connor	Mar. 13, '01	American	4 years	19	"	Caught foot between machine and face of coal	Foot & ankle mashed. Nose and upper lip badly cut.
31	"	New England	Harry Shoenker	Mar. 16, '01	"	sev.	20	"	Kicked by horse	
32	"	New England	Fred Wallace	Mar. 20, '01	"	2 years	13	Driver	Caught between ear and rib	Skull fractured
33	"	New England	James F. King	Mar. 21, '01	"	"	24	Pumper	Ran into grip car (inside)	Leg cut below knee.
34	"	New England	George Barrie	Apr. 10, '01	Italian	8 mos.	24	Miner	Fall of coal	Wound right side of head
35	"	Murray or BH2	Joe Urmod	May 8, '01	American	6	35	"	Cars (inside)	Thumb mashed
36	"	Murray or BH2	F. J. Propst	May 9, '01	American	1 year	38	Blacksmith	Kicked by mule	Kicked in left groin.
37	"	Chatham Shaft	Joseph Blaney	May 15, '01	Scotch	3 mos.	37	Miner	Explosion of gas	Head and hands badly burned.
38	"	"	Hirschel Everson	May 15, '01	American	1	14	Laborer	"	Head hurt and arm broken
39	"	"	Chas. Johnson	May 15, '01	Swede	1	28	Miner	"	Inhaled gas.
40	"	"	Chas. D. Carpenter	May 15, '01	American	4	14	Laborer	"	Head and hands burned
41	"	"	Ralph Desjeto	May 15, '01	Italian	3	"	Miner	"	Burned.
42	"	Murray or BH2	Albert Arnet	May 18, '01	American	2	35	Laborer	"	Leg mashed.
43	"	New England	George Andress	May 27, '01	"	14 yrs.	43	Miner	Caught foot between bumper and rail	Foot badly mashed.
44	"	New England	Frank Bitouidi	May 27, '01	Italian	1	20	"	Fall of slate	Bone in hand broken.
45	"	New England	William Miller	June 4, '01	American	11 mos	24	"	Caught between ear and rib	Right clavicle fractured.
46	"	New England	Mike Balla	June 13, '01	"	6 yrs.	41	"	Fall of slate and coal	Thigh bruised.
47	"	New England	Joe Merrifield	June 14, '01	American	4	17	Grip-rider	Fell over feed box	Both ankles sprained
48	"	Murray or BH2	Russell Perry	June 14, '01	"	1 mo.	34	Laborer	Caught between ear and rib	Left arm broken.
49	"	Chifton	Joe Munkad	June 25, '01	Slav.	1 year	19	Miner	Fall of slate	Hips mashed and cut.
50	Donoghia	Beechwood	Dale T. Nabone	Feb. 28, '01	American	2 mos.	14	Trackman	Mine cars	Left leg fractured and wrist sprained.
51	Kanawha	Cannelton No 2	James L. Dugherty	July 27, '00	Irish	2 yrs.	50	Miner	Fall of coal	Collar bone and ribs broken, breast mashed.
52	"	Coalburg (Bel)	Homier Jones	Aug. 15, '00	American	"	14	Trapper	" slate	Squeezed through hips.
53	"	Virginia	Wm. Hannigan	Sept. 25, '00	"	5 yrs.	20	Driver	Attempting to stop mules	Arm broken.
54	"	Big Mt. Splint	J. P. Chapman	Oct. 2, '00	"	15-20 yrs	45	Miner	Fall of slate	Hand badly hurt.
55	"	Virginia	Joseph McSurley	Oct. 9, '00	"	6 yrs.	20	Driver	Arm caught between roof and car	Small bone in wrist broken.
56	"	Marmet No. 1	William Burger	Dec. 13, '00	"	30 yrs.	56	Miner	Fall of slate	Strait of solar plexus and ribs fractured.
57	"	Ronda	Henry Voiers	Dec. 27, '00	"	since b.	21	Driver	Kicked by mule	Bruised on jaw and temple
58	"	Falling Rock	A. F. Strickland	Jan. 4, '01	"	6 years	26	Miner	Fall of top	Left leg broken above ankle.
59	"	South	Edward Green	Jan. 21, '01	"	5	20	Driver	Caught between mule and car	Thigh broken.
60	"	Acme	John Kirk	Jan. 26, '01	"	20	49	Miner	Car run up on him	Leg broken between knee and ankle.
61	"	Acme	Samuel Stephens	Jan. 29, '01	English	50	58	Poster	Fall of slate	Mashed through back and kidneys.
62	"	Acme	Joseph Cooper	Feb. 13, '01	American	39	49	Miner	"	Injuries in back.

NON-FATAL INCIDENTS FOR THE YEAR ENDING JUNE 30, 1901.

No	COUNTY.	Name of Mine.	Name of person Injured.	Date of Accident.	Nationality	Length of Experience	Age.	Occupati n.	Nature of Accident.	Injuries Sustained.
63	Kanawha	Quincy.....	Robert L. Kelly.....	Feb. 19, '01	American..	1 year..	14	Driver.....	Fall under car.....	Injuries Sustained.
64	"	"	Herbert Turner.....	Mar. 15, '01	"	2 "	14	"Trapper.....	Caught between car and post.....	Leg mashed, necessitating amputation.
65	"	"	Andrew Smith.....	Mar. 28, '01	"	1 1/2 "	20	Mach. helper.....	Fall of slate.....	Hip fractured. Shoulder dislocated, head cut.
66	"	"	Josh. George.....	Apr. 1, '01	"	3 "	20	Miner.....	" " " "	Back strained.
67	"	"	J. B. Moses.....	Apr. 5, '01	"	10 "	15	"	Shot fired while putting in another.....	Face and hands cut.
68	"	"	Ed. Dangerfield.....	Apr. 27, '01	"	15 "	35	"	Caught between two cars.....	Leg fractured below knee.
69	"	"	Jacob Nelson.....	Apr. 30, '01	"	15 "	35	Track layer.....	Fall of slate.....	Left hip crushed.
70	Mason	Spring Fork.....	Thomas Hall.....	Aug. 15, '00	American..	1 1/2 yrs.	35	Miner.....	Fall of slate.....	Leg fractured just above ankle.
71	Fayette	No. 1 (W. P. Rend).....	A. J. McCormick.....	July 5, '00	American..	15 yrs.	48	Miner.....	Powder exploded.....	One hand badly buried.
72	"	No. 1 (W. P. Rend).....	Am. W. McCormick.....	July 5, '00	"	6 "	26	"	"	Buried about face & body.
73	"	"	Geo. K. Hev.....	July 10, '00	"	9 "	36	Track layer.....	Fall of slate.....	Leg and back broken.
74	"	"	Jos. Evans.....	July 16, '00	"	20 "	45	Miner.....	Fall of top coal.....	Collar bone broken.
75	"	"	Robert Pearl.....	July 25, '00	Negro.....	20 "	21	"	Caught between motor & post.....	Crushed about lower part of body.
76	"	No. 3 (W. P. Rend).....	Geo. Satterfield.....	Aug. 3, '00	Afro Am.....	"	24	Driver.....	Caught between car & rib.....	Collar bone broken.
77	"	Fayette.....	Wm. Gerry.....	Aug. 7, '00	American..	5 "	30	Miner.....	Explosion of powder.....	Burned.
78	"	"	Carl Young.....	Aug. 7, '00	"	5 "	25	"	"	"
79	"	No. 2 (W. P. Rend).....	James L. Tredway.....	Aug. 9, '00	American..	35 "	35	Miner.....	Failed to get out of way of water-box.....	Leg broken.
80	"	"	Arthur Kincaid.....	Aug. 11, '00	"	1 year..	23	"	Fall of slate.....	Pelvic bone fractured and ankle sprained.
81	"	Thurmond.....	Ed. Spencer.....	Aug. 14, '00	"	3 mos.	22	"	"	Leg Broken.
82	"	"	John M. Greese.....	Dec. 4, '00	Austrian..	Many yrs.	40	"	Incline rope struck him.....	Mashed.
83	"	"	Wm. Seley.....	Dec. 12, '00	American..	6 mos.	20	"	Fall of slate.....	Left arm broken and head bruised.
84	"	"	Ed. Nuckles.....	Dec. 19, '00	Afro-Am.....	3 "	22	Laborer.....	Runaway car on incline struck him.....	Wrist sprained and head bruised.
85	"	"	Harvey Fean.....	Dec. 19, '00	American..	15 yrs.	28	Miner.....	Car ran back down incline.....	Leg broken and contusion of scalp and brain.
86	"	"	John Davis.....	Dec. 19, '00	"	18 "	24	"	"	Four small toes cut.
87	"	"	James Strong.....	Feb. 11, '01	English.....	Always	35	"	Fall of slate.....	Leg broken.
88	"	"	Thy Fry.....	Feb. 18, '01	"	"	"	"	"	"
89	"	"	Wm. Burnwell.....	Feb. 20, '01	American..	"	21	"	Caught, bet cars on incline.....	Leg broken.

NON-FATAL ACCIDENTS FOR THE YEAR ENDING JUNE 30, 1901.

No.	COUNTY.	Name of mine.	Name of person Injured.	Date of Accident.	Nationality	Length of Experience	Occupation.	Nature of Accident.	Injuries Sustained.
120	McDowell.	Crozer No. 1	Paul B. Rickdale.....	Jan. 2, '01	American..	5 years.	Miner.....	Fall of slate.....	Head & leg slightly hurt, toe broken.
121	"	McDowell.....	E. Blankinship.....	Jan. 7, '01	"	14 "	"	"	Bruised.
122	"	Elkhorn.....	Wm. Smith.....	Jan. 16, '01	"	5 "	Trapper.....	Caught between car & rib.	Back, thigh & leg burned
123	"	Bottom Creek.....	John R. Bates.....	Jan. 17, '01	"	6 "	Miner.....	Fall of slate.....	Foot crushed.
124	"	"	Ernest Craghead.....	Jan. 17, '01	Colored.....	2 days.	Laborer.....	" " coal.....	Leg broken.
125	"	Crozer No. 2.....	Abram Brown.....	Jan. 29, '01	"	1 yr.	Miner.....	" " slate.....	"
126	"	McDowell.....	Lee Jarrett.....	Feb. 2, '01	American..	28 "	"	Explosion of dust & smoke	Face, neck & hand burned
127	"	McDowell.....	R. E. Jarrett.....	Feb. 2, '01	"	28 "	"	" " " "	Neck burned.
128	"	McDowell.....	Robert Miller.....	Feb. 2, '01	"	15 mos.	Trapper.....	Car ran over foot.....	Right ankle badly mangled
129	"	Elk Ridge.....	Tom Cobbs.....	Feb. 2, '01	Afr-Am.....	13 yrs.	Miner.....	Fall of slate.....	Confusion of head, back and chest.
130	"	Turkey Gap.....	H. Broadnax.....	Feb. 13, '01	American..	15 mos	"	" " " "	Bladder ruptured and foot hurt.
131	"	Albema.....	Ed Anderson.....	Feb. 26, '01	Afr-Am.....	15 mos	"	" " " "	Bladder ruptured and ribs fractured.
132	"	McDowell.....	Chas. Sperry.....	Mar. 11, '01	Italian.....	18 mos.	"	" " " "	Foot pinched.
133	"	McDowell.....	Emery Dancy.....	Mar. 19, '01	American..	2 1/2 "	"	" " " "	Compound fracture of leg below knee.
134	"	McDowell.....	Woody Cay.....	Mar. 20, '01	"	6 "	Trapper.....	Caught between cars.....	Both legs bruised.
135	"	Pulaski.....	Adam Lindley.....	Mar. 25, '01	"	2 yrs	43 Mine boss.....	Cable struck him.....	Toes on left foot broken.
136	"	Crozer No. 2.....	Wm. Steven.....	Apr. 13, '01	Afr-Am.....	2 "	Driver.....	Locomotive ran into car.....	Thigh dislocated.
137	"	Pulaski.....	Wesley Shannon.....	Apr. 17, '01	"	8 "	Miner.....	Fall of slate.....	Arm and leg hurt.
138	"	Crozer No. 2.....	Henry Coles.....	Apr. 26, '01	"	3 1/2 "	"	" " " "	Fracture of femur and cut on leg and face.
139	"	McDowell.....	G. G. Watkins.....	May 10, '01	"	2 mos.	17 Trapper.....	Struck by locomotive.....	3 ribs broken and hurt on head.
140	"	McDowell.....	Chas. Baxter.....	May 20, '01	American..	11 mos.	"	Fell and caught by car.....	Left leg fractured.
141	"	Empire.....	Wm. Mitchell.....	May 23, '01	"	15 yrs	30 Fire boss.....	Fall of slate.....	Compound fracture of fore arm.
142	"	Delta.....	Hughes Law.....	May 29, '01	Afr-Am.....	2 mos.	Miner.....	" " " "	Fracture of ankle, wrist and back injured.
143	"	Turkey Gap.....	Walter Robinson.....	June 2, '01	"	3 yrs.	21 Trapper.....	Run over by car.....	Nose broken, both ankles sprained & back injured
144	"	McDowell.....	E. R. Blankenship.....	June 6, '01	American..	"	Miner.....	Fall of slate.....	Compound fracture of right wrist.
145	"	McDowell.....	W. J. Blankenship.....	June 6, '01	"	Old mi'	"	" " " "	Burned on face & hands.
146	"	Elkhorn.....	Tins' Alexander.....	June 26, '01	"	7 years	Brakeman.....	Slipped and fell while running after trip.....	
147	Mercer.....	Caswell.....	W. H. King.....	July 18, '00	American..	27 yrs.	Miner.....	Shot not put in far enough	

148	Mercer	Caswell	Oakley King	July 18, '00	American	Sev. yrs	17	Miner	Shot n't pushed in far en'gh	Burned on face & hands.
149	"	Goodwill	George Moody	Aug. 30, '00	"	1 yr.	18	Trip runner	Struck face against car.	Face cut, nose mashed & back of head cut.
150	"	Goodwill	G. W. J. Thomas	Sept. 3, '00	"	2½ mos	25	Miner	Fall of "kettle bottom"	Head cut and concussion of brain.
151	"	Goodwill	Mike Massi	Sept. 1, '00	Hungarian	5 to 6 yr	30	"	Mule fell	Wrist fractured.
152	"	Goodwill	Frank Chmunt	Nov. 23, '00	"	2 mos	12	Helped father	Lump of coal rolled on ankle	Ankle severely bruised.
153	"	Goodwill	John A. Fisher	Nov. 27, '00	"	1 "	25	Miner	Fall of slate	Fracture of tibia.
154	"	Goodwill	Peter Wolfinger	Dec. 1, '00	Hungarian	2 "	30	"	"	Fracture of femur and internal injuries.
155	"	Goodwill	Wm. Loflon	Mar. 1, '01	Afro-Am	3 "	26	"	"	Knee dislocated and internal injuries.
156	"	Louisville	Geo. Johnson	May 27, '01	American	7 yrs	27	"	" sandrock	Right knee cut & bruised.
157	Mingo	Logan	Harman Ward	July 14, '00	"	"	30	Miner	Explosion of powder	Face, neck, hands & wrist burned.
158	"	Logan	Millard Hensley	Aug. 11, '00	"	5 mos	23	M. Mach. run'r	Arm caught between roof & top of mine machine.	Contusion of elbow joint of right arm.
159	"	Maritime	Alzo L. Dickinson	Sept. 10, '00	"	3 yrs	26	"	Fall of draw slate.	2 fingers mashed, necessitating amputation.
160	"	Logan	Boone Hutchinson	Oct. 3, '00	"	8½ yrs	"	"	Foot slipped under mine machine.	Right big toe cut.
161	"	Logan	Joseph Clay	Oct. 4, '00	"	"	22	Mach. runner	Fingers caught in mine machine.	Ring & little finger of right hand lacerated.
162	"	Logan	Geo. Vermillion	Oct. 8, '00	"	"	21	" helper	Drill fell on hand	Back of left hand lacerated.
163	"	Red Jacket	Wm. D. Hammond	Oct. 9, '00	"	5 mos	12	Trapper	Car jumped track & he fell off	Contused wound of left thigh.
164	"	Logan	James Childress	Oct. 11, '00	"	4 yrs	22	Mule driver	Mule kicked him	Face and lip hurt.
165	"	Maritime	John Lawhorn	Dec. 3, '00	"	1 mo	23	Driver	Trampled on by mules	Fracture of left arm & right leg.
166	"	Red Jacket	Charles Rohrer	Jan. 9, '01	German	17 mos	56	Miner	Fall of slate	Left knee & chest injured.
167	"	Red Jacket	E. A. Rice	Jan. 16, '01	American	3 yrs	33	Shooting coal	Powder smoke ignited	Face and hands burned
168	"	Red Jacket	John Fox	Jan. 22, '01	"	3 "	37	"	Shot blazed out	"
169	"	Logan	Miram Gullett	Mar. 18, '01	"	4 "	23	Driver	Fall of slate	Contused wound on right side of face
170	"	Logan	Tate Carnes	Mar. 19, '01	"	6 "	24	Blacksmith	Caught by band & wound around shaft	Both arms broken at wrist
171	"	Red Jacket	Geo. W. Allen	Mar. 26, '01	"	9 mos	27	Shooting coal	Staid too near while shot fired	Face and hands burned
172	Barbour	Berryburg	Will Marks	Nov. 2, '01	White	"	"	"	Explosion, powder smoke	Leg broken
173	"	Berryburg	Joseph Kelly	Mar. 6, '01	"	"	"	Coal loader	Fall of rock	Burned about face and hands by gas.
174	"	Berryburg	Thomas Walker	Apr. 11, '01	"	"	"	Mach. runner	Disregarded danger sign of Fire Boss	Face cut & bruised across back
175	Preston	No. 1 (Mer. C. Co)	Thos. Trobridge	Nov. 16, '01	American	20 yrs	38	Miner	Fall of bone coal	"
176	Randolph	Randolph	Edward Hynes	Jan. 7, '01	English	6 yrs	25	Miner	Fall of coal	Head & shoulder bruised.
177	"	Randolph	J. K. Scott	Jan. 7, '01	American	6 "	32	Asst. trackman	Caught between mine cars	Both hips squeezed and collar bone dislocated & hip sprained.
178	"	Randolph	George Check	Jan. 8, '01	Pole	2 "	30	Miner	Fall of coal	"

NON-FATAL ACCIDENTS FOR THE YEAR ENDING JUNE 30, 1901.

No.	COUNTY.	Name of Mine	Name of person Injured.	Date of Accident.	Nationality.	Length of Experience.	Age.	Occupation.	Nature of Accident	Injuries Sustained.
179	Taylor.....	Flemington.....	Cecil Anglin	Jan. 1, '01	American..	9 years.	35	Miner	Fall of slate.	Arm broken, head and body injured.
180	"	Flemington	Joshua O. Moore...	May 18, '01	" ..	8 days.	...	Fireman	Opened blow-off pipe too quickly.....	Left side and hip scalded and collar bone broken.

Accidents Below Were Received After the Above Table was Compiled.

.....	Mellowell..	Shawnee.....	Corris D. Hylton..	Jan. 3, '01	American..	3 or 4 yrs.	20	Miner.....	Fall of Kettle bottom	Contusion of head and back.
.....	"	Upland	Elmer Barlow	May 8, '01	" ..	5 years.	28	"	" " lump of coal.....	Leg broken above ankle...
.....	"	Greenbrier.....	M. M. Maxey.....	June 3, '01	" ..	sev. yrs.	...	"	" " " ..	Bruised ankle joint and foot.
.....	Mercer	Coaldale	William Denson ..	Jan. 30, '01	Colored....	4 years.	24	"	Fall of slate	Bruised on back and body

FATAL ACCIDENTS FOR THE YEAR ENDING JUNE 30, 1901.

HARRISON COUNTY.

Dec. 10, 1900. John Jimmie, Alexander Mine, was shooting coal within 10 or 12 feet of face of his room when slate fell killing him.

Dec. 22, 1900. F. Marion Slaughter, Mt. Clare Mine, was riding up plane in car, coupling broke, letting the car run to bottom of incline, where it struck another car, throwing him out and killing him.

Jan. 31, 1901. William Day, Glen Falls Mine, was killed by a fall of slate. He was mining coal when a large piece of slate fell from the roof, killing him instantly. Coroner notified, but decided inquest not necessary.

Mar. 22, 1901. Geo. McCray, Hutchinson Mine No. 2, was killed while dropping a car off of the tippie into mouth of the mine, by being caught between the rib and car.

Apr. 2, 1901. Robert Miller, Pinnickinnick Mine No. 1, was killed by a fall of slate. The accident was caused by a piece of slate, which hung over the roadway, falling. It was considered safe by all the workmen.

Apr. 16, 1901. John Pilcher, Briar Hill Mine No. 1 was killed by a fall of coal. He was mining in a break through from heading to air course. Place 9 feet wide had hole cut through 4 feet wide to air course, and part of it 9 feet wide, and in blocking part of the cut the other coal, about 1500 lbs., fell on him. Coroner notified of the accident but decided inquest unnecessary.

June 12, 1901. W. H. Yoder, Glen Falls Mine, was killed by a fall of slate. A shot had been made and men were loading coal when a small piece of slate fell from the roof near face of coal, striking deceased on the back, breaking it and causing instant death. Coroner stated not necessary to hold inquest.

MARION COUNTY.

Aug. 28, 1900. Casper Komatz, Chiefton Mines, was killed by a fall of slate. He was loading coal in his room when a large piece of draw slate fell and struck him. Accident was caused by want of care on his part as he neglected to properly timber his place. The verdict of the jury was: * * * "that Casper Komatz came to his death by a fall of slate rock."

Nov. 8, 1900. Mike Verapa, Chieftain Mine, while finishing up his room, and at the time of the accident he was pulling down coal from roof, when a large piece of slate fell crushing him down and causing death.

March 11, 1901. A. S. Léeper, Anderson Mine, was shoveling coal in a car when a piece of slate fell on him. If he had had his props set it would not have happened. His death was caused by his own neglect.

March 23, 1901. Mike Sukroe, New England, was working in company

with another man and they started to take up their track in order to put it in another place to the right of where they were working. while at work on the track a small piece of slate fell from the roof, striking him on the left side of the head, killing him instantly. The deceased was ordered by the Mine Foreman to take the slate down before beginning to work under it; this he neglected to do.

March 30, 1901; died March 31, 1901. John Hurpstek, Montana Mine, was killed by fall of coal. He had shot part of the coal down and went to mining under the open end without taking the loose coal down. He mined back till he struck a powder crack when the coal fell.

Apr. 18, 1901. James Pettit, Monongah Mine No. 3, was killed by mine cars. The only information that could be secured was that he offered his assistance to motorman and went back to ride on rear of trip. The motorman after starting back noticed Pettit's light disappear and stopped immediately when he discovered that Pettit had fallen from the bumper of the car and that two cars had passed over him. Coroner's verdict, "Purely accidental."

Apr. 29, 1901. Sam Barrie, Chiefton Mine, was killed by fall of draw slate. He was tamping hole in neck when draw slate gave way falling on him and killing him instantly. The place where this accident occurred was examined by Mine Inspector T. E. Thomas, and attention of Mine Foreman was called to the condition of the roof, which is draw slate. He acknowledged it to be dangerous and directed deceased to take it down at once, this he failed to do.

May 15, 1901. Antonio Pugliese, Maynard F. Beatty, Goekoro Pugliese, Joseph L. Nichols, Carl R. Hunter, John H. Everson, Braso Antonio, Dono Alfieri, Giovanni Venditti, and Jeff. D. Fast, Chatham Shaft, were killed by an explosion of gas. For details of this accident see special report.

MARSHALL COUNTY.

Jan. 12, 1901. Jonathan Watson, Benwood Mill Mine, was sent in bank with a mule to haul a load of coal out for the air furnace and to take in a five gallon can of gasoline for gas engine. He was found a short time afterwards by E. J. O'Malley, an employe, lying on the ground, in the entry with his lamp out, in a dazed condition. The lamp was lying 6 or 7 feet away from him. The gasoline was intact. Probably had a fit. He died on the 26th, his death said to have been caused by a burn on the knee gangreening.

OHIO COUNTY.

Oct. 29, 1900. Benj. Gonder, Stock Yard Mine, was killed by a fall of slate. The man working with Gonder said they had taken all the loose stone and slate down and tested the roof of the part of the room in which Gonder worked and they both thought it safe. Coroner's verdict was: "that Gonder's death was caused from being crushed under a fall of slate * * *."

KANAWHA COUNTY.

Nov. 20, 1900. Wm. Bruce McConihay, Lewiston Mine, was killed by a fall of slate. He was helping turn a room and they had pulled all the

draw slate and all the slate looking unsafe down a few days before, and when the slate fell they had just finished tamping a hole in the coal. The coal commenced to squeeze, but before they could get out the slate fell, striking both men and knocking out their lights. One of the men was knocked unconscious for a few minutes, as soon as he came to himself he went for assistance, but when it arrived the boy was dead with the slate still on his head.

Jan. 4, 1901. Louis H. Graves and Verney Brown, C No. 2 of the Kellys Creek Mining Co., were killed by car on incline. When the empty car in which they were riding reached top of incline, regular hooker-on pulled pin cutting car loose from rope before it passed chock-blocks, allowing it to run back down incline. An inspection of this incline was made by Jerry Meade, District Mine Inspector, and he says, "The drum and ropes on this incline, as well as the tracks, are in good condition and the accident was entirely due to the inexperience of the man who pulled the pin, letting the trip loose before landing it above the chocks on the top of the incline."

Jan. 31, 1901. John Samples, Charlmore Mine, was killed by falling slate. He was loading coal which had been cut with machine and had been warned several times to keep slate well posted, which he failed to do. Slate had been taken down to the face of his coal by the day-men and after shooting down and loading three cars went under the draw slate with the above result.

Feb. 20, 1901. Will Cox, No. 2 Mine of the Kelley's Creek Mining Co., was killed by fall of coal. He was helping on machine when face of coal fell over crushing him.

March 28, 1901. Charles Hager, Klondike Mine, was killed by fall of slate. The deceased was employed by contract to cut coal with mining machine, and at time of accident he was acting as helper on machine, having asked his helper to run the machine. While they were working the slate fell, killing him instantly. They had examined the top and thought it was safe.

FAYETTE COUNTY.

July 5, 1900. John McCormick, W. P. Rend's No. 1 Mine, was burned by powder, from the effects of which he died. He had carried powder in the mine in a cloth sack and while making a cartridge, dropped a spark in the powder. He was taken to the Sheltering Arms Hospital on July 6th and was sent home and died July 22nd. This accident was investigated and verified by Mine Inspector Pinkney.

July 23, 1900. James Crumm, Brown's South Nuttall Mine, was killed by a fall of slate. Above the coal seam in this man's room there is about 9 inches of draw slate. This Mr. Crumm had posted previous to firing a shot. When the shot was fired it knocked the posts out and he failed to set them in again before commencing to load coal produced by the blast. The result was that a piece of slate fell striking him on the head and killing him instantly. There were posts in the room before the slate fell which he could have used. This report was made by Edward Pinkney, Mine Inspector.

Aug. 7, 1900; died Aug. 11, 1900. Geo. Alexander, W. P. Rend's No. 2 Mine, was killed by a mine car. Deceased was letting a car in his room, the floor of which dips about 3 per cent. He was riding on the front end of the car to regulate its speed. Going in the room it gained considerable speed and for some reason he failed to apply the brakes, and lost control of the car. It ran into the face of the coal and he being on the front was caught between the car and face of coal and crushed. Report verified by Mine Inspector Pinkney.

Aug. 16, 1900. David Saddler, Collins Mine No. 1, was killed by a fall of slate. Slate in Saddler's room was quite bad, being very brittle and full of slips. He had been repeatedly cautioned by the Mine Boss to take it down, he was trying to hold it up, had props set on each side of the track. Slate fell between props striking him and knocking him down and smothering him. There were plenty of timbers and cap pieces in the room. Verified by Mine Inspector Pinkney.

Aug. 21, 1900. Clarence Wood, Echo No. 1 Mine, was killed by being thrown from a car. He was bringing a car out of an entry that dips about 3 and 1-2 per cent. and in the middle of which is a very sharp curve. In bringing cars out of this entry, drivers had been accustomed to use three sprags in checking the speed of the car, but it is supposed Wood only used one and that the car got from under his control, and when the car struck the curve he was thrown from it against the slate roof. Accident investigated and verified by Edward Pinkney, Mine Inspector.

Aug. 24, 1900. Emory Paine, No. 2 Gauley Mountain, was run over by mine cars and killed almost instantly. At the noon hour he left his door and came out to the shop and while jumping on and off a train of slowly moving empties, with no locomotive attached, he fell under the cars, two of which passed over him. His action in jumping on the cars was purely for amusement and positively prohibited by the Company. The accident occurred outside the mine.

Sept. 18, 1900. Wylie Smith, Fire Creek, was killed by a fall of draw slate. He was working with and under the direction of his father when the draw slate fell breaking his leg below knee. He and his family would not allow him to be sent to the hospital, and on the 22nd the doctor found blood-poisoning had set in and took him to the hospital. They amputated his leg but there was so much poisoning in his system that he died on the 23rd. Had he gone to the hospital in the first place both his life and his legs could very probably have been saved.

Oct. 6, 1900. Joseph Richardson, Sugar Creek Mine, was suffocated by mule falling on him. He was knocked from rear end of car by a small piece of slate and lay in the middle of the track in a semi-conscious condition. The following driver with two mules ran on to him. A second piece of slate fell on one of the mules, and apparently one of the mules fell across the chest of the man and squeezed the breath out of him. Verified by Mine Inspector Pinkney.

Oct. 11, 1900; died Oct. 20, 1900. Samuel Cooper, Dimmock Mine, was killed by a fall of slate. He was drawing a pillar when a piece of slate fell from "horse back." In Mr. Pinkney's report on the accident he says, " * * * The place was timbered as well as could be desired and four

unused posts, together with cap pieces, which could have been used, had he considered it necessary. It is my opinion, after having made the examination, that no negligence could be attached to either the man himself or the management."

Oct. 17, 1900. James Nelson, Diamond Mine, was killed by a piece of draw slate falling on him. It is thought that the car which he was driving got off the track and struck post, jarring a piece of slate loose, which struck Nelson on the head. Investigated and verified by Mine Inspector Pinkney.

Oct. 24, 1900. James Baker, Blume Mine No. 2, was killed by a fall of slate in the shape of a horse back. The slate was considered solid. No detailed report was made of this accident.

Oct. 27, 1900. Clyde Judson, W. P. Rend's No. 2 Mine, was killed by a fall of slate. He had been bailing water and just finished filling his box and sat down on the entry to wait for the driver to haul it away. While waiting, a piece of slate fell in the room he had bailed and as he was helping clean up the slate, another piece fell striking him. The roof had been examined and was considered safe. Investigated and verified by Mine Inspector Pinkney.

Nov. 12, 1900. Robert Thaxton, Rush Run Mine, was killed by a fall of coal. He was making an undercut under a triangular piece of coal, which had been shot on both sides when a piece of coal weighing about 500 lbs. fell on his head, crushing his skull and killing him instantly. Mine Inspector Pinkney says, "Inquiry made revealed the fact, beyond dispute, that the accident was caused by the man's own carelessness or lack of judgment."

Nov. 30, 1900. John Horaker, Collins Mine No. 2, was killed by a fall of slate. Horaker and his partner were pushing car out of place down to entry and as they turned to go on entry rear of car struck a prop knocking it down and letting slate fall, which struck Horaker. Investigated and verified by Mr. Pinkney.

Dec. 4, 1900. Morgan Pierce, Crescent Mine, No. 5, was killed by a fall of draw slate, near the face of his working place. The draw slate at this place is unusually thick and of a soft nature, for this reason top coal about 14 inches thick was left up and propped. On the night previous to the accident the top coal and slate fell on the right side of the room, extending half way across the roadway. When Mr. Pierce returned to his room on the morning of the accident he found this top fallen and the attention of Mr. John Thompson was called to the situation. He assisted Mr. Pierce in setting a prop under that part of the top coal and slate which was still hanging over the roadway. Mr. Thompson in a sworn statement to Mine Inspector Pinkney, states that he told Mr. Pierce that in his judgment it would be unsafe to work under the hanging slate and suggested that it be either taken down or more securely propped, to this Mr. Pierce agreed, but stated that he would keep a close watch on it and proceeded to clean up the slate, preparatory to getting a car into his room. After working for about one-half hour a large piece of the draw slate fell on Pierce, killing him instantly.

Dec. 19, 1900. Andrew Coleman and Charles Knuckles, Gt. Kanawha

Colliery Co., Ltd., No. 1 Gas Mine, were riding up incline in second car on third trip after starting up work in the morning. Coupling pin came out allowing car to run back down incline to tippie where they were thrown from car and instantly killed. Mr. Pinkney says that the men are in the habit of riding up the incline, and as every thing in connection with the mechanical arrangements of the incline is always kept in such good condition, no danger was anticipated.

Dec. 21, 1900. O. T. Mitton, Hallinger Mine No. 1, was caught between roof and top of car and killed. No detailed report was made of this accident.

Jan. 7, 1901. Charles Anderson, Harvey Mine, was killed by car he was driving jumping the track and striking and knocking down a post, thereby causing slate to fall upon Anderson. Accident was due to his reckless driving.

Jan. 10, 1901. David W. Warren, White Oak Shaft No. 2, lost his balance while dumping a bucket of slate at top of shaft and fell into shaft, a distance of 37 feet. Lived a couple of hours.

Jan. 18, 1901. Geo. Williams, Macdonald Mine, was walking by side of cars to set brake at top of heavy grade and was caught and rolled between car and rib. There is a distance of 75 feet wide enough for this purpose. His clothes caught on car and carried him further down to tight place. He died the next day. Verified by Mine Inspector Pinkney.

Jan. 23, 1901. Caleb Anderson, Macdonald Mine, was loading the top of his car on the right hand side when a "kettle bottom" fell catching him with his head over the car edge and killing him instantly.

Feb. 5, 1901. Sam Nicastro, Collins Mine No. 2, was struck by a trip of loaded cars and killed. It is double tracked at the place of accident, plenty of room, and his being struck cannot be accounted for.

March 2, 1901. John Osborn, Brown Mine, was killed by a fall of slate caused by his failing to post room in proper manner. He was sitting on a powder keg mining when the slate, which should have been pulled down, fell and struck him. Verified by Inspector Pinkney.

March 12, 1901. James Irvington, Collins Mine No. 1 was killed by a fall of slate, "kettle bottom." Mr. Pinkney says, " * * * There is no doubt the slate fell suddenly and without warning and in all probability gave no sign of being dangerous until entirely undermined."

March 16, 1901. Henry Kelly, Gauley Mountain No. 1, was killed by a fall of slate. He was sitting on the bottom bench mining the top coal just under a surface crack. He cut the rib and a small piece of slate came down on his head and mashed it into the bottom coal. A man who was working in the same place with him when the accident happened says it was purely accidental, there being no signs of the slate being in a condition to fall. He also states there was plenty of timber in the place.

March 20, 1901. Price Adkins, Collins Mine, was killed by a fall of sandstone. It is supposed he was tampering a shot when the rock fell, covering him up. The place was well timbered, reasonably close to face. He had a post under one edge of this rock. He must have known it was dangerous some time before it fell, from the fact it must have bagged

down as the coal on top of the seam was mined away from under it as it approached the open crack which evidently let it loose entirely. Reported by Mr. Pinkney.

March 21, 1901. Horace Harris, Greenwood Mine, was coming out with a load and is supposed to have fallen off in front of car on considerable grade, his light having gone out. He lived about four hours.

March 25, 1901. Sidney J. Meadows, Collins Mine, was killed while in the act of loading car under top coal which undoubtedly ought to have been taken down as both Meadow and partner knew the piece to be dangerous. They were working on a pillar. Reported by Mr. Pinkney.

April 3, 1901. Collins Washington and Henry Blair, Fire Creek Mine, were killed by a fall of slate. They were working for David Morris in a room that had just been turned. It had just been widened from neck and these two men were in the act of making the last cut on broad side to get the full width. The slate that fell was in the nature of a slip and showed plainly and should have been posted or taken down. David Morris, the contractor states that he instructed them the evening before to post the slip, this they neglected to do.

April 9, 1901. E. W. Morris, Macdonald Mine, was killed by a fall of slate in the face of his place. He was drawing a pillar and had just fired a shot and gone back to see the result. The coal had fallen but the overlying slate was still up and did not fall until just when he went back. The place was properly timbered in every respect and several unused posts were in the room. He should have waited until the powder smoke cleared away before going back. There was another shot already to fire which he intended firing before he left for home. Reported by Mr. Pinkney.

May 7, 1901. O. H. Arrington, Collins Mine No. 1, was killed by a fall of slate at face of working place. Place was well timbered and slate fell between posts and was caused by a *slip*.

May 14, 1901. Caleb Cox, Macdonald Mine, was shearing down top coal when a piece of slate, triangular in shape, immediately above the top coal on which he was shearing fell, killing him.

June 5, 1901. J. W. Willis, Central Mine, was killed by a fall of slate in his room. He knew the slate was loose but persisted in working under it, though warned by others not to do so. Failure to properly post his room was the cause. Posts were near enough for him to protect himself. He made an attempt to pull the loose slate down the day before, but did not succeed and left it hanging.

June 10, 1901. Ed. Strader, W. P. Rend's Mine, was letting a railroad car out from the tipple. The brake broke, precipitating him in front of the moving car, which ran over his legs. He was sent to the Sheltering Arms Hospital, but died en route to the hospital.

June 10, 1901. William T. Rule, Kilsyth Mine, was not working but simply watching framing of drift mouth timbers. While hole was being fired on grade, he ran into drift mouth which was then being timbered when a quantity of dirt and slate rolled on him with above result, that is he died three hours afterwards. It would appear the concussion from the blast caused a large quantity of dirt and slate between timbers to fall.

RALEIGH COUNTY.

March 27, 1901. Patent Hobbs, Raleigh Mine No. 1, was caught by mining machine chain and pulled under cut and both legs cut off. He was standing on right of machine near it with his back to same and stepped back into the chain. He died about seven hours afterwards.

M'DOWELL COUNTY.

July 18, 1900. E. M. Thurman, Turkey Gap Mine, was killed by a "kettle bottom" falling. It seemed perfectly safe and was sounded and examined by J. L. Hurndon, about two minutes before it fell. The room seemed to be perfectly safe. In a sworn statement to W. J. Preece, Mr. Hurndon says, "E. M. Thurman was working for me in the Turkey Gap Mine as back-hand. I had just fired a shot in the face of the room and went back to see the results of the shot, telling the young man at the same time to stay back until I examined the place. I commenced to pull down some loose coal in the face of the room and heard something fall immediately behind me, and I looked around and not seeing his light called him and he did not answer me. Then I looked under the 'kettle bottom' and found he had been caught by same. I moved the slate off and found he was dead. It was not 10 feet from the face to outside post. I had sounded the place where he was caught not over two minutes before and considered it perfectly safe."

July 30, 1900. Jos. Yancy, Pulaski Mine, was killed by a fall of slate from the roof of the room where he was working. He was working in a new place taking out a pillar and instead of blasting the coal was cutting it out with his pick, and when he pulled the coal the slate fell too. The slate boss had been in the room just before the accident and told him that it would be best for him to watch the slate overhead as he had examined it and it was broken and liable to be dangerous. Had he blasted the coal instead of pulling it with his pick the slate would either have come down or shown up so that the break could have been seen. Investigated by Mine Inspector Preece.

Aug. 20, 1900. Robert Jones, Algoma Mine, was killed by a fall of slate. He had placed a prop under a loose piece of slate. He decided a collar necessary and placed one prop under the collar, knocked out single prop before securing second prop under collar and the slate fell. Justice of the Peace notified and decided inquest not necessary.

Aug. 29, 1900. Wm. English, Algoma Mine, was killed by a fall of slate. Dan Sloniker in a sworn statement to a Justice of the Peace, says, that Wm. English attempted to pull down a piece of slate but failed to get it down, he then pulled down another piece which formed a kind of wing to the first piece, when this wing came down the first piece came also, striking him on the head and back of shoulders, crushing him to the earth and instantly killing him.

Sept. 24, 1900. Thos. Walton, Turkey Gap Mine, was killed by a fall of slate. In a sworn statement to Mine Inspector Preece, Walter Carter who worked with Walton says, that they did not sound the slate to see if it was loose the morning of the accident, but we both knew it was loose Saturday the 22nd. He told Walton that it was loose and liable to

fall at any time, but he said if it fell it would not hurt us, as he thought it very thin. It was our own carelessness for we both knew it was our duty to take it down. Investigated and verified by Mr. Preece.

Oct. 2, 1900. James A. Lee, Crozer Mine No. 1, had shot his coal and it did not come down as expected. Placed a cartridge in the hole preparing to make another shot when the coal, which appeared perfectly safe fell on him and at the same time a piece of slate fell, catching him and pinning him down. He lived about three hours after he was taken home. Justice of Peace decided inquest unnecessary.

Oct. 16, 1900. Janos Nagy, Algoma Mine was killed by a falling "kettle bottom." Assistant Mine Boss Stanburg says that on the morning of the accident he examined this room and found it in good condition, and he considered it one of the safest in the mine. There were no indications of a "kettle bottom" when he examined it. Justice decided no inquest necessary.

Oct. 30, John H. Hodge, Shawnee Mine, with his partner had made a six foot cut and fired a blast and it failed to pull it. They worked at it with their picks and could not pull it and had just started to load a car when the whole cut fell, catching Hodge and crushing him about head and body, from the effects of which he died in a few minutes. Justice decided inquest not necessary.

Nov. 2, 1900. Morris Stone, Pulaski Mine, was at work cleaning up some slate from a small fall that was on the track when a piece of slate fell from the roof and caught him, killing him instantly.

Nov. 3, 1900. Geo. Hosten, Peerless Mine, was killed by a "kettle bottom" falling at face of his working place. It came down without any warning, crushing him and killing him instantly.

Nov. 8, 1900. Garland Williams, Keystone Mine, was working with his brother-in-law and they had just started in a new place. A piece of slate was hanging out and after making and loading some coal, his brother-in-law told him to get back as he was going to pull down the slate, in place of getting back Williams walked under the slate, and it fell on him, killing him almost instantly.

Nov. 9, 1900. Robert L. Payne, Bottom Creek Mine, was caught and killed by falling slate. Justice of the Peace notified but decided inquest unnecessary.

Nov. 13, 1900. Burt Dingman, Greenbrier Mine, was killed by a fall of slate. In a sworn statement to Wm. J. Preece, Mine Inspector, Charles Woody says that he was working with Dingman on the day of the accident and that he was assisting to take up a pair of curved rails where a stump had been taken out. Dingman was in the act of drawing a spike when a piece of slate about 4 inches thick fell, without warning, killing him instantly. He further states that all precautions had been taken as they had taken down all the loose slate in the morning.

Nov. 29, 1900. Nat Otey, Lynchburg Mine, was at work cleaning track and was caught by locomotive and rolled against rib and had his neck broken. The place where accident occurred was fully fifteen feet wide. It is the opinion of some that he let his light go out and sat down on the track and went to sleep; for at this place the engine could be seen fully 200 feet away and could be heard easily 300 yards away.

Dec. 4, 1900. Henry Davis, Ashland Mine, was killed by a fall of top rock at face of No. 8 entry. Justice of the Peace decided inquest not necessary.

Jan. 2, 1901. Robert Pugh and Robert G. Hayes, Rolte Mine, were killed by a fall of slate. Geo. Dean, in a sworn statement to Wm. J. Preece, says that he and the above men were employed as miners, and that they were all working No. 3 cross entry taking out a stump. The two men left the face of the work and went down the entry about 75 feet, for what purpose he did not know as they had no business there. He heard something fall and went to see what it was and found the slate had fallen on the entry. He called the men but received no answer so thought they had gone outside. He called again but receiving no answer looked under the slate and found both the men dead. In answer to a question of Mr. Preece's, Mr. Dean stated that he considered the place perfectly safe and that it was well timbered and that they had plenty of other timber, and that he did not attach the blame to any one.

Jan. 3, 1901. Charles Lyons, Powhatan Mine, was working with his partner on a pillar. On the morning of the accident the Assistant Mine Foreman was in their working place and instructed them to set three props. They said they would do so at once, but did not do it until after five in the evening after loading ten wagons of their pillar, then prepared to set the props when the top fell on Lyons, killing him instantly.

Jan. 21, 1901. Elijah Altice, Shamokin Mine, was sawing slabs some distance from track when he stopped his work and went and stood between the bumpers of two loaded cars and talked to a man on the opposite side, when the cars from above bumped down, catching him between bumpers. The coroner's verdict was "That Elijah Altice came to his death by his own carelessness by two cars bumping together * * *."

Jan. 30, 1901. Geo. H. Moore, Lynchburg Mine, was working as "back hand" for another man and they were turning off an entry or breakthrough in an old working. The Bank Boss instructed them to set timbers in the morning and they failed to do so, and a piece of slate fell about 4 P. M., striking Moore and causing the injuries from which he died.

Feb. 4, 1901. Robert Davis, Upland Mine No. 2, was standing on the side of the empty car waiting for the driver to pull the loaded car out of his room. When the driver came out the empty car was not quite far enough out of the way. The loaded car struck the corner of it knocking it off the track catching his head between car and prop, killing him instantly. Coroner's verdict was, "* * * Robert Davis came to his death accidentally by being caught by a car * * *."

Feb. 6, 1901. Thomas Kellar, Turkey Gap Mine, was killed by a piece of loose slate, which he should have pulled down, falling on him. His partner says that the shot which the night shift had fired had not blown down all the coal and we started to dig it down. Kellar examined the slate before I went in and I stepped in and cut the coal to the crack, then Kellar went in and the slate fell on him. Kellar was said to be very careless about taking the slate down, never doing it if he thought he could get the other shift to do it.

March 4, 1901. John Andre, Algoma Mine, was killed by a "kettle bottom" falling, killing him instantly. Justice of the Peace decided inquest unnecessary.

March 19, 1901. Joseph Vengoin, Powhatan Mine, was working in an entry and did not wait for a driver to pull out the loaded wagon. His partner was on the back of the car holding the brake and Vengoin was riding on the front of the car and stepped off in a narrow place. The entry was twelve feet wide where the accident occurred and if he had stepped on the opposite side of the car he would not have been hurt as there is plenty of room. He should not have ridden on the front of the car. No inquest necessary.

April 10, 1901. Senior Jackson, Crozer Mine No. 1, was killed by falling slate. It appears that he and his partner had fired a heavy shot across the face of the coal. The cut did not come down so they drilled a hole on rib and while tamping this hole the cut of coal fell and a piece of draw slate came with it. His partner says Jackson was looking up with the probable intention of examining this slate when it fell. Investigation made by Mr. Preece.

April 22, 1901. Joe Pepoy, Houston Mine, had made a cut under coal, when shot, the coal settled down on floor instead of throwing out. Pepoy in loading his car undermined the mass of coal, causing it to roll on him. Mr. Preece says, "I was in the mine when this accident occurred. The roof was good at this place and there could be no blame on any one beside the unfortunate man himself, had he used ordinary care in taking down the coal it could not have occurred as there was no slate for him to contend with.

May 2, 1901. James Thompson and Melvin Cartwright, Lick Branch Mine, were killed by a fall of slate. In a sworn statement to W. J. Preece, W. N. Jones, Mine Foreman, says, that he was in their place about 4 P. M. May 1st, and notified these men to stand some timber in their place. I was not in that place again until after accident and did not see any timber up, although the timber was in the room ready for them. On the day of the accident the slate boss cautioned them about the slate and told them to set timber, which, when they started to do, the slate fell on them. The coroner's verdict was as follows: "* * * their death was due to carelessness on their part, and further * * * exonerate the said Lick Branch Colliery from all blame."

May 8, 1901. Paul Richardson, Bottom Creek Mine, had started to work that morning as laborer for miner. The slate men came to take down a piece of slate but were requested to leave it up as the miner for whom Richardson was working said that they did not have to go under it and he wanted to get his car loaded first. Richardson said he was going out for dinner and instead went under the slate when it fell killing him. The other man was busy cutting and had warned him not to go under the slate.

May 31, 1901. Charles Hacker, McDowell Mine, was working at pillar No. 39 when a piece of draw slate fell, catching him, causing internal injuries from the effects of which he died seven hours later.

June 5, 1901. Sanders Johnson, Pulaski Mine, was at work cleaning

up some slate in a room in the mine and a "kettle bottom" fell from the roof and struck him. He died three hours later.

MERCER COUNTY.

July 26, 1900. J. F. Cyphers, Caswell Mine, was killed by a fall of slate. George Huff in a sworn statement to W. J. Preece, says, "I was cleaning up a fall when Cyphers came to where I was. He stopped and talked with me some time, and was standing close to where I was working, as a spectator. A fall of slate came and he attempted to leave, but the slate caught him, had he remained where he was he would have been safe. The man was not in his working place.

Oct. 11, 1900. Mike Geary, Caswell Mine, was caught between car and rib and crushed to death. He was dropping a loaded car out of his room as usual and in so doing was caught in a narrow place against the rib by the car. He was in this position when found, otherwise the place was in good condition. The above is a sworn statement made to W. J. Preece by John Wasco, who went with other parties to see why Geary did not come out of the mine in due time.

Nov. 13, 1900. Elisha K. Sutherland, Booth-Bowen Mine, was killed by a fall of slate. W. J. Preece says, "I examined the place where the accident occurred and found out that this was not his place but his brother's. He merely went in this room to see his brother, then took a pick and commenced to take down top coal. His brother protested against his doing so, but he kept on till it caught him."

Dec. 25, 1901. Walter McGinnis, Pocahontas West Mine, was killed by a fall of slate. He had been warned by the timber man not to work under this piece of slate. He said, "If that piece comes down it's got to fall." He was found under the slate about an hour afterward, with his skull crushed. He knew the slate was bad and said he would shear the rib and that that would let it fall and that he would be careful and not get under it.

April 21, 1901. D. Lancy Danely, Buckeye Mine was killed by a fall of slate. He lived until June 3, 1901.

MINGO COUNTY.

Aug. 10, 1900. Elias Brown, Freeport Mine, was killed by a fall of slate. He was warned to take the slate down over his head. He said he would cut out one corner and set a post and the post was there ready for him. When found he was down under the slate.

Aug. 14, 1900. Gideon Mahr, Alma Mine, was killed by a fall of slate. The coroner was notified, but he did not go to hold inquest.

April 4, 1901; died April 18, 1901. Ira Mounts, Grapevine Mine, shot coal down on his keg of powder to hide same and in loading up coal next day found powder keg bursted and it is supposed the powder caught from spark from his lamp, burning him fatally.

June 12, 1901. G. G. Fugit and James Snodderly, Logan Mine, were suffocated. The probable cause of accident was the ignition of some powder which was being hauled in an empty car into the mines by an electric current communicated to powder through the draw bar of car by a short current. W. J. Preece says, "Investigated an accident at this

Colliery whereby two men lost their lives, the one a motorman and the other a brakeman. It appeared by the evidence produced at the inquest that the powder had been sent up the incline for the night shift and unloaded and instructions given by the Pit Boss, Charlie Adams, for it to be left there for the night shift to take in. Instead of this being done, it appears that the brakeman loaded it in the cars, and the motorman started with the trip and the powder in it. There was no other person with the trip besides these two men, the motorman and brakeman and they were asphyxiated. When found it appeared to me that there was a short circuit and the current was communicated to the powder kegs, which fused and lit the powder. No damage was done to either the motor or cars and the dust and loose coal were not ignited when the powder burnt. The appearance around the place indicated no violence as of an explosion. Verdict of the Jury: " * * came to their death from suffocation from gas generated by the ignition of powder, probably from an electric current and positively not from explosion of gas or dust from the face of the coal. * * "

BARBOUR COUNTY.

Nov. 2, 1900. Charles Goff, Lewis Pack, Wm. A. Brown, Andrew Blackburn, J. A. Crawford, "Nat" Mosby, George Murphy, Richard Johnson, Lawrence A. Duncan, Ollie Marks, Joe Jackson, and four unknown persons, Berryburg Mine, were killed by an explosion of powder smoke. For details see special report.

PRESTON COUNTY.

July 16, 1900. Alexander McCormick, Irona Mine, with another man was drawing a rib and had been visited by mine boss less than one hour before accident. They had plenty of timber and the roof appeared good, yet as they were about 25 feet from former fall the boss cautioned them to look for one at any time. This they promised to do, yet in a short time the fall came, killing McCormick instantly.

Oct. 1, 1900. W. S. Wolfe, Orr Mine, was killed by a fall of slate. The fall was what is usually termed by miners, a "horse-back" or a "pot." He was, at the time of the accident, attempting to set a prop under it. He must have cut the post too long, for he set it in place and then hit it with an ax, knocking it out, the piece of slate falling, catching him.

TAYLOR COUNTY.

Oct. 11, 1901. Robert Thompson, Sandlick Mine, was killed by a fall of slate. No details accompanied the report.

TUCKER COUNTY.

Jan. 19, 1901, Jay Benford, Coketon Mine No. 3, was helping his father do some timbering in the mine when a large amount of slate fell, completely burying him.

ADDITIONAL McDOWELL COUNTY.

The following three accidents were not received until after the above report had been completed:

Feb. 2, 1901. Hardin C. Nickles, Pulaski Mine, was killed by a fall of slate from the roof of the mine. His death was instantaneous.

Feb. 12, 1901. Charles H. Tyler, Roanoke Mine, made a cut on one side of the heading, and in shooting some coal put in a heaving shot about 18 inches into the solid. The shot didn't pull any of the solid coal but loosened it, then he very carelessly laid down and made a cut in this loosened coal, which, as soon as he cut back to crack, rolled over on him, mashing him to death. He was a thoroughly competent miner, in fact, one of the best, and every one was surprised at his taking such a risk as he did. Coroner decided inquest unnecessary.

May 11, 1901; died May 12, 1901. Rell Treppass, Upland Mine, had made his cut and shot as usual, but the shot failed to throw completely out, a large lump of coal which was left standing upright. He was warned of the danger by mine foreman, but went to work loading before taking down the lump, which fell later, catching him between it and car. He died the next day.

CHAPTER XIV.

EXPLOSIONS.

On April 4, 1901, at the Grapevine Mine, in Mingo County, an explosion of powder killed one man; on June 12, 1901, at the Logan Mine, in Mingo County, an explosion of powder killed two men; and on July 5, 1900, at the W. P. Rend Mine No. 1, in Fayette County, one man was killed and two injured by a powder explosion. In all there were four persons killed by powder explosions.

At the Berryburg Mine, in Barbour County, on November 2, 1900, there were fifteen persons killed and one injured by an explosion of powder smoke.

In the Chatham Shaft at Farmington, Marion County, on May 15, 1901, an explosion of gas killed ten persons and injured five others.

In all there were 29 persons killed by explosions.

Thirty-two persons were non-fatally injured by explosions, of which only five were gas.

A list of the explosions is given in the tables following:

FATAL EXPLOSIONS 1900-1901.

COUNTY.	NAME OF MINE.	NAME OF COMPANY.	Name of Person Killed.	Date.	Kind of Explosion.
Marion	Chatham Shaft.....	George's Creek Coal & Iron Co.....	Antonio Pugliese.....	May 15, 1901.....	Explosion of gas.
"	Chatham Shaft.....	George's Creek Coal & Iron Co.....	Maynard F. Beatty.....	May 15, 1901.....	Explosion of gas.
"	Chatham Shaft.....	George's Creek Coal & Iron Co.....	Goekoro Pugliese.....	May 15, 1901.....	Explosion of gas.
"	Chatham Shaft.....	George's Creek Coal & Iron Co.....	Joseph L. Nichols.....	May 15, 1901.....	Explosion of gas.
"	Chatham Shaft.....	George's Creek Coal & Iron Co.....	Carl R. Hunter.....	May 15, 1901.....	Explosion of gas.
"	Chatham Shaft.....	George's Creek Coal & Iron Co.....	John H. Everson.....	May 15, 1901.....	Explosion of gas.
"	Chatham Shaft.....	George's Creek Coal & Iron Co.....	Brasso Antonio.....	May 15, 1901.....	Explosion of gas.
"	Chatham Shaft.....	George's Creek Coal & Iron Co.....	Dono Alderi.....	May 15, 1901.....	Explosion of gas.
"	Chatham Shaft.....	George's Creek Coal & Iron Co.....	Goavaennie Venditti.....	May 15, 1901.....	Explosion of gas.
Fayette.	W. L. Reid's No. 1.....	George's Creek Coal & Iron Co.....	Jeff. D. East.....	May 15, 1901.....	Explosion of gas.
Mingo	Grapevine.....	W. P. Reid.....	John McCormick.....	July 5, 1901.....	Explosion of powder.
"	Logan.....	Grapevine Coal Co.....	Ira Mounts.....	April 4, 1901.....	Explosion of powder.
"	Logan.....	Logan Cons. Coal Co.....	G. G. Fugit.....	June 12, 1901.....	Explosion of powder.
Barbour.	Berryburg.....	The Southern C. & Trans. Co.....	James Snoderly.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Charles Goff.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Lewis Pack.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Wm. A. Brown.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Andrew Blackburn.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	J. A. Crawford.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Nat. Mosby.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	George Murphy.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Richard Johnson.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Unknown.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Unknown.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Unknown.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Unknown.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Lawrence A. Duncan.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Ollie Marks.....	Nov. 2, 1900.....	Explosion of powder smoke.
"	Berryburg.....	The Southern C. & Trans. Co.....	Joe Jackson.....	Nov. 2, 1900.....	Explosion of powder smoke.

EXPLOSIONS—NON-FATAL, 1900-1901.

COUNTY.	NAME OF MINE.	NAME OF COMPANY.	Name of Person Injured.	Date.	Kind of Explosion.
Harrison	Gypsy	Briar Hill Coal & Coke Co.	Lawrence Angolot	Dec. 17, 1900	Shot blew out.
"	Gypsy	Briar Hill Coal & Coke Co.	Wm. Holbert	March 13, 1901	Explosion of powder.
"	Gypsy	Briar Hill Coal & Coke Co.	Wm. Maze	March 13, 1901	Explosion of powder.
"	Gypsy	Briar Hill Coal & Coke Co.	W. G. Maze	March 13, 1901	Explosion of powder.
"	Gypsy	Briar Hill Coal & Coke Co.	George Teems	March 13, 1901	Explosion of powder.
"	Gypsy	Briar Hill Coal & Coke Co.	A. D. Teems	March 13, 1901	Explosion of powder.
"	Harbert	Briar Hill Coal & Coke Co.	Joseph Pitchner	March 30, 1901	Shot went off.
"	Howard	Howard Coal & Coke Co.	Luigi Schipnaw	June 27, 1901	Cartridge exploded.
Marion	New England	West Fairmont Coal & Coke Co.	Luigi Ramono	Nov. 24, 1900	Shot exploded.
"	Highland	Highland Coal & Coke Co.	Chas. Tocachis	March 4, 1901	Cartridge exploded.
"	Chatham Shaft	George's Creek Coal & Iron Co.	Joseph Blaney	May 15, 1901	Explosion of gas.
"	Chatham Shaft	George's Creek Coal & Iron Co.	Hirschel Everson	May 15, 1901	Explosion of gas.
"	Chatham Shaft	George's Creek Coal & Iron Co.	Chas. Johnson	May 15, 1901	Explosion of gas.
"	Chatham Shaft	George's Creek Coal & Iron Co.	Chas. D. Carpenter	May 15, 1901	Explosion of gas.
"	Chatham Shaft	George's Creek Coal & Iron Co.	Ralph Desipio	May 15, 1901	Explosion of gas.
Kanawha	Coalburg No. 4	Robinson Coal Co.	J. B. Moses	April 5, 1901	Premature explosion.
Fayette	No. 1 (W. P. Rend)	W. P. Rend	A. J. McCormick	July 5, 1900	Explosion of powder.
"	No. 1 (W. P. Rend)	W. P. Rend	Andrew McCormick	July 5, 1900	Explosion of powder.
"	Fayette	Low Moor Iron Co.	Wm. Jerry	Aug. 7, 1900	Explosion of powder.
"	Carbon	Carbon Coal & Coke Co.	Carl Young	Aug. 7, 1900	Explosion of powder.
McDowell	McDowell	McDowell Coal & Coke Co.	W. T. Baker	April 8, 1901	Explosion of powder.
"	McDowell	McDowell Coal & Coke Co.	Lee Jarrett	Feb. 2, 1901	Explosion of dust and smoke.
"	McDowell	McDowell Coal & Coke Co.	R. E. Jarrett	Feb. 2, 1901	Explosion of dust and smoke.
Mercer	Caswell	Caswell Creek Coal & Coke Co.	Robert Miller	Feb. 2, 1901	Explosion of dust and smoke.
"	Caswell	Caswell Creek Coal & Coke Co.	W. H. King	Feb. 2, 1901	Explosion of dust and smoke.
Mingo	Logan	Logan Cons. Coal Co.	Oakley King	July 18, 1900	Shot blew out.
"	Red Jacket	Red Jacket Coal Co.	Harman Ward	July 18, 1900	Shot blew out.
"	Red Jacket	Red Jacket Coal Co.	E. A. Rice	July 14, 1900	Explosion of powder.
"	Red Jacket	Red Jacket Coal Co.	John Fox	Jan. 16, 1901	Explosion of powder smoke.
Barbour	Berryburg	The Southern C. & Trans. Co.	Geo. W. Allen	Nov. 26, 1901	Shot blew out.
"	Berryburg	The Southern C. & Trans. Co.	Will Marks	Nov. 2, 1900	Explosion of powder smoke.
"	Berryburg	The Southern C. & Trans. Co.	Joseph Kelly	March 6, 1901	Explosion of gas.

11-20-1901

11-20-1901

11-20-1901

11-20-1901

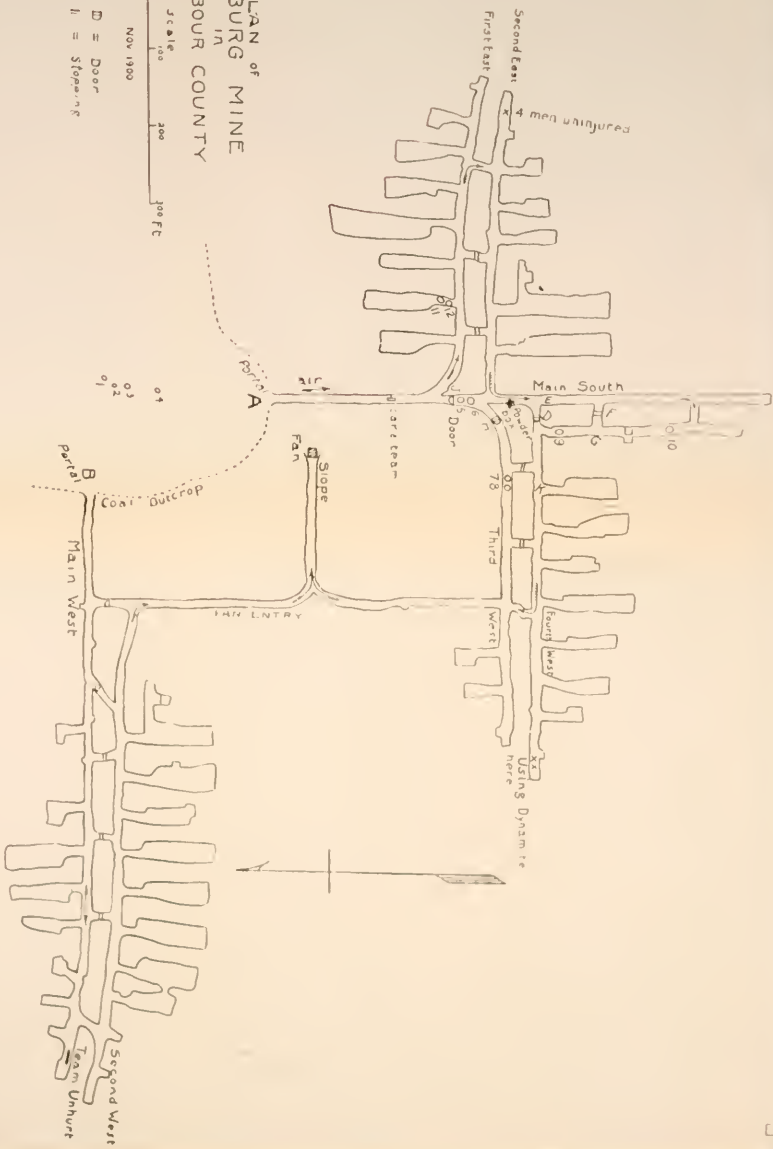
11-20-1901

11-20-1901

5

NOV 1961

Door = Door
Stoppage = Stoppage



BERRYBURG MINE DISASTER, WEST VIRGINIA,

Which occurred November 2nd, 1900.

(By JAMES W. PAUL, Chief Mine Inspector.)

The Berryburg Mine is situated in Barbour County, W. Va., about six miles from the town of Philippi, on a branch line of the Baltimore and Ohio Railroad. The mine is the property of and is operated by the Southern Coal & Transportation Company.

The bed of coal which is being mined is the Pittsburg and has a thickness of seven to nine feet.

The Berryburg Mine, which is a drift, was opened the forepart of 1900. On February 16th, 1900, the writer was at this mine and at that time the headings had been driven not over 200 feet.

The extent of the mine workings increased rapidly, and by November the main headings had reached a distance of 600 to 800 feet. From these headings had been turned lateral headings and from the latter rooms were turned. The plan of the mine consists of one main heading running due south and two headings running due west, each of which pairs has separate drift mouths 260 feet apart. These headings are called respectively the South and the West Mine.

The plan of the working of these two mines may be seen on the accompanying map.

These two mines are connected by a tunnel called the Fan entry, which is used for the return air current on its course to the fan. At the middle point of this Fan entry is the fan slope at the mouth of which is located a ventilating fan, which is used to exhaust the air from the two mines.

This fan, driven by an electric motor of constant speed, is twelve feet in diameter; and runs at 450 revolutions per minute and produces 300,000 cu. ft. of air per minute.

By reason of the constant speed of the fan when running and the absence of regulators in the air course the volume of air in circulation was greater than the development of the mine required, but the fan was intended to furnish the ventilation of the mine when the mine had reached a very much greater development. Had the fan been run regularly and at a lower speed it would have been better adapted to the requirements of this mine in its state of development.

THE EXPLOSION OF THE MINE.

By reason of the effort to increase the producing capacity of this mine as rapidly as possible both a day and night force of workmen were employed.

It was while the night force was on duty on the night of November 2nd, 1900, at 11:30 o'clock that the mine exploded, resulting in the death of 14 persons, and doing practically no damage to the mine.

The coal within this mine is frequently disturbed by the appearance of clay seams, and at the time of the explosion the East headings were being driven through one of those clay seams (washouts.) The coal is typical of the Pittsburg deposit, but from a physical point of view the coal, when cut with machines of the cutter bar type is broken up into small cuttings and a dust, which latter is of an apparently volatile nature and deposits itself upon the floor and walls throughout the mine.

PROBABLE PRESENCE OF FIRE DAMP.

From all the evidence obtained at the investigation of the disaster nothing was produced to show that at any time had gas been found in any part of the mine. Two days after the explosion, and after the ventilation of the mine had been stopped for 12 hours, a party of experienced mine men visited the workings of the mine and made a close inspection for gas, but failed to find a trace.

No deduction could be drawn from the foregoing conditions as to the cause of the explosion. Further testimony revealed the exact condition of the mine immediately after the explosion, and also the location of and the condition of the bodies of the men who lost their lives in the explosion. Referring to the map of the mine it may be observed that within the neck of No. 2 room, which had been abandoned, on the first east heading at 11 and 12 were found the dead bodies of Charles Goff and another man who, at the time of being recovered, was not identified. The body of Goff showed signs of having been badly burned, as did his companion. It appears that these two men in their confusion took the wrong course to get out of the mine and became victims of the gases of explosion (after gases). Four men who at the time of the explosion were working at the face of the second east heading came out uninjured through the first east heading and passed the room, where the two men were found, so it is clear that at the time the four men came out it would have been possible for Goff and his companion to have escaped if they had been able to maintain a light and had not been so badly burned.

Of the two men found on the main heading at 5 and 6 one was Richard Johnson, the other was not identified when found, but was probably W. A. Brown. Both of these men were burned quite badly. On the main air course at 9 was found "Nat" Mosby, who had no sign of having been burned. He was killed by the after gases, and as his duties did not require him at the point where he was found it is probable he was coming from the face of the main air course. At 10 Lewis Pack's body was found. His body having no sign of having been burned, he was a victim of the after gases.

At 7 and 8 the bodies of J. A. Crawford and one unidentified were found, neither of which were burned externally.

On the outside about 75 feet to 100 feet from the entrance at 1, 2, 3 and 4 were found Andrew Blackburn, with all his hair burned off and face and hands burned, also three unidentified bodies badly mutilated. Two of these bodies were completely severed at the waist and the head of one body was almost completely gone. On the outside and in line with the

course of the main heading are several poles upon which is strung the electric wires. Against one of these poles the head of one man had struck with such force as to completely destroy the head. The poles nearest the mine were canted several inches from a vertical position, showing that the force coming out of the mine was very great.

At the time of the explosion there were, in addition to the above, four other men in the South Mine—Ollie Marks, L. A. Duncan, William Marks and Joe Jackson. These men escaped to the outside, but each was badly burned, so badly that Duncan died the following day and Ollie Marks on the third day after the explosion. Will Marks recovered and Joe Jackson subsequently died.

This mine is ventilated by a fan of ample capacity—and from the evidence submitted at the inquest it appears that when the fan was run at its regular speed the volume of air made to circulate in the mine was so great that the men on the headings and air-courses had trouble keeping their lamps burning, and for this reason the fan was often stopped, but being started again upon the mine becoming filled with smoke from the powder combustion and from the lamps.

At the time of the explosion the fan was not running and there was no evidence to show that it had been running for several hours previous to the explosion.

Near the face of the fourth west heading a large fall of roof slate had fallen and on the night of the explosion this slate was being broken up with dynamite in charge of L. A. Duncan.

Simultaneously with this work the shot firer, Andrew Blackburn, was shooting down the coal, in different sections of the mine, with powder.

At the star on the main heading is where the shot firer usually kept two kegs of powder.

About twenty minutes before the explosion occurred Mr. A. J. Rock, the night watchman, was near the West Mine, and in his evidence says that he saw Andrew Blackburn and another man come out of the South Mine and go to the powder magazine, which is a short distance from the fan slope, and while they were unlocking the magazine heard Andrew Blackburn say, "I never wanted to see any one hurt." Mr. Rock left immediately, saying, in his testimony, that he thought the men intended blowing up the powder magazine.

To go back to the dynamite shooting, Mr. Duncan was directing the shooting of the dynamite to break the slate in the fourth West heading. Several sticks of dynamite were placed to break the slate, and at some distance from the slate a box containing 18 sticks of dynamite was left. The fuse was lighted and the men were making their escape when the mine exploded, with the loss of life above mentioned. The box containing the dynamite was never found.

The assumption might be that this dynamite shot caused the mine to explode, but, while it may have been the primary cause, it was not the ultimate, as the condition in another section of the mine indicates that the explosion in its greatest violence came from the powder box on the main heading.

Upon exploring the mine after the explosion it was found that the coal

was on fire near the star; the powder box was blown down the main heading to E; the switch lever at the entrance to the Fourth West heading was bent toward 9; the door at D was blown to K; the stopping at F was blown toward G; the door at H was blown toward 7, and the force came out of the mouth of the mine at A with great destruction.

That dust took an active part in this explosion was fully demonstrated, as the dust was completely charred along the main heading from J to F and as far up the Fourth West to the first room at K. Some charred dust was also found at the face of the fourth west, but not to the extent as found in the vicinity of the powder box.

Evidently an explosion of some element or elements took place within the vicinity of the powder box on the main heading.

An inference may be drawn as to probable cause of the explosion at this powder box from the evidence of Mr. A. J. Rock and from the fact that the body of Andrew Blackburn, the shot firer, was found on the outside of the mine.

Had there been powder in the powder box there would have been no occasion for Blackburn to go to the outside for powder.

Taking the four circumstances, namely: 1st, that there was powder in or near the powder box; 2nd, that A. J. Rock heard Andrew Blackburn say at the powder magazine, "I never wanted to see anyone hurt;" 3rd, that Blackburn's body was found on the outside of the mine, and 4th, that an explosion did occur in the vicinity of the powder box, these may have been the chief points which led the Coroner's jury in its verdict to say that the men killed in this explosion "came to their death by an explosion * * * caused by the firing of powder or dynamite in the South Mine intentionally or accidentally by some one unknown to this jury."

The following is a part of the most important testimony given to the Coroner's Jury:

Dr. C. B. Williams, company physician, said:

"Have been in employ of the company since June 18th, 1900. Have examined persons burned with fire. Examined two of the persons burned in this explosion and they are now dead, one of which, L. A. Duncan, I treated 18 hours. On Sunday morning (Nov. 4th) I examined all the dead bodies and found that they were burned externally only. Duncan died from external burns, he being burned all over his body. Men who wore woolen clothes were not so badly burned as those who wore cotton clothes.

"Lewis Pack had no burns, and it is my opinion he was smothered or asphyxiated by smoke or bad air. The first to be brought to the power house were L. A. Duncan, Will Marks, Ollie Marks and Joe Jackson, all of which were burned."

Chas. E. Priest, mine boss for the company:

"I have been in and about a coal mine for 25 or 30 years. The explosion occurred about 11:30 Friday night (Nov. 2, 1900). I was at home asleep when it occurred. Was notified by Geo. Carey and Ed. Mitchell.

"I took my safety lamp and went to the mine and found at the entrance to the south pit some clothing and ties burning, which I put out.

I then went in a short distance and found a body and a team of horses. The smoke was too thick to go further, so I had to come back. Went to work to get the fan started, but could not do so, as it was too badly wrecked. By this time the smoke had cleared away sufficiently so I could go in.

"A post on the main heading near the fourth west was on fire, and going in I found the first trap door (J) open, it being blown out.

"It is the night foreman's duty to run the fan at night. Ollie Marks was in charge of the mine Friday night.

"Duncan said (told me) that 'they were shooting dynamite at third west and had about 18 sticks of it.' They were using it to break up a large boulder. Duncan says he was thrown up against a pole when the explosion took place, and says he does not know how he got out. He was found outside of the mine. The rest of the dynamite could not be found, and I suppose it went off.

"I examined the mine every day and never found any gas. I think the cause of the explosion was a keg of powder ignited at the powder box.

"I found Richard Johnson and a man I did not know at trap door near the horses, but neither one spoke. I helped carry out nine men, Lewis Pack, Nat Mosby, R. A. Crawford, R. Johnson, Chas. Goff, W. A. Brown, Andrew Blackburn and two unidentified. Some of those men had their clothes burned off. Lewis Pack was not burned at all.

"I left the mine 5:30 p. m. Friday.

"Since the explosion I have thoroughly examined the mine and find no gas.

"I found Mr. Blackburn fifty feet from mouth of mine outside. Crawford and Brown were found nearest the powder box badly burned.

"Johnson and Blackburn are the coal shooters and were the worse burned of all.

"The fan has been run about four hours since the explosion. It took from 11:30 Friday night to 8:30 Saturday morning to repair the fan."

W. S. Brydon, superintendent Laurel Creek C. Co.:

"I arrived at Berryburg Saturday morning between nine and ten o'clock and offered my services. I went into the mine with the mine foreman, Mr. Shonk, Mr. Hollihead and others, whom I do not know, and found the mine in a very good condition. There was an odor of sulphur, also a slight fume of dynamite.

"It is my opinion the explosion was caused by dynamite and powder on the main entry at the powder box.

"I found no sign of gas or after damp in the mine."

Ernest Chilson, Superintendent of Berryburg Mine:

"It was customary to have in the mine two kegs and part of two other kegs of powder and no dynamite except for immediate use. Miners were not allowed to carry powder into the mine.

"There were usually employed about eighty men in the mine at one time.

"Small particles of dust were on the sides of posts and mine car next to the powder box, at which point I believe the explosion originated. I believe the powder in the box was exploded by the act of some person, either intentionally or accidentally.

"The capacity of the fan is 300,000 cubic feet of air per minute under a water gauge of one inch.

"My instructions to the mine bosses were to run the fan whenever they should want it. I visit the mine nearly every day.

"An ordinary mine lamp will not burn in a current of 300,000 cubic feet of air per minute.

"Our power plant consists of two hundred and sixty (260) horse power. We have eleven mine machines, but do not operate over three at one time. In addition to running mine machines, the power plant runs a locomotive, a fan and two small motors and furnishes power for twelve lights. The locomotive requires 110 horse power for maximum capacity, the fan 47 horse power, two drills each 1 1-2 horse power, one motor four horse power, one motor seven horse power and the lights, one horse power each."

Nelson Male, laborer in mine:

"At my own request I have been allowed to shoot my own coal at times.

"The fan did not run at all times, sometimes I have had to go to the pit boss and ask for fan to run. I did not want it to run all the time.

"I have often gone to the pit boss to get him to stop the fan, as I could not work without getting too cool."

Edward Mitchell, coal loader in mine:

"On Friday night I was clearing up stone on the second left heading, and there were three others with me.

"I heard two sisses, saw a flash and then felt force of the explosion.

"We started down the second left and came through a cross cut to first left and came out of the mine. As I came out I heard some fellows hollering, help, help.

"No shots had been fired on our side.

"The powder box was up in second left quite a piece. I would not have passed it coming out of second left."

George Carey, coal loader in mine:

"Some boys with me said there was fire in the mine, and I felt heat. We started down second left, but couldn't get through, but got out first left.

"As I came on outside of the mine I saw Marks and Duncan. The explosion had the effect of making me vomit and feel sick.

"The fan quit running fifteen or twenty minutes after I went into the mine. I could tell by the air and my lamp."

Richard Anderson, day laborer in mine:

"I was loading a car when the explosion took place. Ed. Mitchell and George Carey were with me.

"When the explosion occurred I heard a sharp shot and after two or three minutes a blaze and hot smoke.

"Mitchell said the mine was on fire, so we came down to the first left and out.

"The air was good until the flash occurred.

"In coming out I passed some one hollering and the horses. Some one was under the truck. I do not know who it was. I crawled out for fifty feet."

H. L. Larew, timber man and tracklayer:

"I was at work in the est Mine Friday night.

"They did not run the fan all the time, said teh y had not power to run it. I heard different men say this. No official ever told me about not having sufficient power to run the fan.

"The air Friday night was the worst since I have been here (since Aug. 24th)."

John Simpson, Superintendent with J. W. Ellsworth & Co., Washington Co., Pa.:

"I came to Flemington last night (Saturday) and heard about this explosion. I called up the officers and they wanted me to come over to see it. I went through the mine this morning with the superintendent, mine boss and one other gentleman. We were down main No. 1 east and returned through No. 2 east to the main heading, then up main heading and back through its parallel and then up No. 4 West, where we examined the rooms and then back to the main heading and to the outside.

"From my observations my opinion is that the seat of the explosion is on the main entry and near the mouth of No. 2 east. My reason for this conclusion is that I found the box or part of the box said to have contained powder, carried up the main heading above No. 4 west, also the lever that turns the switch at the mouth of the No. 4 west entry was bent toward face of the fourth west entry. The trap door that stood on No. 4 west between main entry and parallel (D) was carried down No. 4 west possible eighty-five to one hundred feet (K), and the next cross cut beyond No. 4 (F) was blown toward the parallel. On the other hand, on the outside of the main entry, the force of the explosion has come out toward the pit mouth, and evidence of it is clearly shown on the poles erected there to carry the electrical power. Am also informed three or more bodies had been blown clear out of the pit mouth.

"The timbers and facings of the coal at and near to No. 2 east, were charred more there than any other place, and as we went away, either south, east or west, the evidence of the explosion diminished.

"At the face of the east entries there was no evidence of any explosion. These entries were, so far as I could see, the highest elevation in the mine, also from the fact that they had just cut through a clay vein would make it the most likely place to find gas, had there been any in the mine, but I could not detect any evidence of any gas there.

"At or near the face of No. 4 west entry, where the rock was said to have been broken by dynamite, there was some evidence of an explosion; that is, there was charred coal or dust on the facings, but nothing in comparison to what was near the mouth of the entry.

"The miners' tools in the cut-through between No. 3 and 4 west were just where they had left them, and in the last room on the entry, which is on a higher elevation than where the rocks were lying, I found a full car and miners' tools undisturbed.

"There is a possibility that there was not a thorough explosion of the dynamite, and the crustations on the coal facings indicate that coal dust had exploded and generated carbonic oxide gas that killed the remaining men.

"My opinion is, that some one, carelessly or otherwise, ignited the powder that was there and that brought about the explosion."

Arie Marks, electric drill runner in West Mine:

"At the time of the explosion I was in the little shop to the east, was just out to get my dinner bucket.

"I saw a flash at the mouth of the South Mine and in a moment one at the West Mine. I ran into the South Mine for my brothers. I saw L. A. Duncan on the outside and his shirt was burning and found my brothers quite a ways in the mine, and brought Ollie out and returned and got Willie, who I found just this side of first entry sixty feet from the powder box.

"The air in the West Mine was not bad on that night, but some time before there had been complaint about bad air."

A. J. Rock, watchman:

"I have been employed as watchman since the 20th of March (1900.) On Friday night I had been over my beat and I saw two men come from the South Mine to the powder magazine, and they had a conversation. One was Andrew Blackburn, and he had a box under his arm and he turned his face from me; he set the box down and commenced unlocking the magazine, and I heard him say, "I never wanted to see any one hurt."

"I came down to the powder house and just then heard the explosion. This was 15 or 20 minutes after the men arrived at the powder magazine. I then ran up the track as fast as I could and saw that it was not the magazine. Just at that time Duncan raised up before me and exclaimed, "O God, somebody tear my clothes off." I tore them off and took hold of him and laid him down on my overcoat. Then I went up the line farther and saw Ollie Marks, who was burning. Mr. Tabbott and I saw another man by a car, we also saw another man.

"The fan was not running when I saw the men go up to the magazine.

"Blackburn was killed and was found in the mine.

Thomas Hillihead:

"The mine had been explored before I went in. I found the mine in very good condition. To me the cause of the explosion is an unsolved problem."

Following the taking of the testimony the Coroner's jury rendered a verdict as follows:

STATE OF WEST VIRGINIA,

Barbour County, to-wit:

An inquisition taken at Berryburg, in the County of Barbour, on the 4th and 5th days of November, 1900, before W. G. Keys, a Justice of Barbour County, upon the view of the bodies of Charles Goff, Lewis Pack, William A. Brown, Andrew Blackburn, J. A. Crawford, "Nat" Mosby, George Murphy, Richard Johnson, Lawrence A. Duncan and four other unknown and unidentified bodies there lying dead.

The Jurors, sworn to inquire when, how and by what means the said named persons came to their death, upon their oath do say, That the above named Charles Goff, Lewis Pack, William A. Brown, Andrew Blackburn, J. A. Crawford, "Nat" Mosby, George Murphy, Richard John-

son, Lawrence A. Duncan and four other unknown and unidentified persons, and each of them, came to their deaths by an explosion on the night of November 2nd, 1900, caused by the firing of powder or dynamite in the South Mine of the Southern Coal and Transportation Company's Mines at Berryburg, in said county, intentionally or accidentally by someone unknown to this Jury.

In testimony whereof the said Justice and Jurors hereto set their hands.

W. G. KEYS, J. P.,
C. T. PETTERSON,
M. N. LOUGH,
J. S. KENNEDY,
IRA GREEN,
LEWIS MALE,
CLAUDE PAYNE,
Jurors.

A PROBABLE THEORY.

A probable theory of this explosion, based upon the conditions within and at the mine at the time of the explosion is ventured.

In the first place the fan had not been running for several hours, and as the mine has no natural ventilation the air within the mine was at a standstill.

Heavy powder shots had been discharged throughout the mine and dynamite had been used in the breaking of slate.

Under these conditions the mine would be full of powder and dynamite smoke, and it is probable that in the heavy powder shots a part of the powder was not entirely consumed, or so incompletely consumed as to evolve a considerable volume of carbon monoxide gas (carbonic oxide), which is inflammable and will explode.

It is further safe to say that the last dynamite shot fired caused the eighteen sticks of dynamite nearby to discharge. This would have the effect of stirring up the dust within the mine. Following immediately upon this the powder at the powder box was discharged by some unknown means, and this in turn ignited the carbonic oxide gas and dust, and the mine explosion was the result.

The resulting gases would be composed largely of carbon dioxide, which will not support life.

FARMINGTON SHAFT MINE EXPLOSION.

Report of T. E. Thomas, Mine Inspector.

(The Chatham Shaft No. 1 is 253 feet deep.)

CLARKSBURG, W. VA., May 21st, 1901.

HON. JAMES W. PAUL,
Chief Mine Inspector,
Charleston, W. Va.

Dear Sir:—

In pursuance with the regulations, I hereby respectfully submit to you my report of an explosion occurring on May 15th, 1901, at 9:30 a. m. at Chatham Shaft No. 1, of the George's Creek Coal & Iron Company, located at Farmington, and in the First Mining District of West Virginia, resulting in the death of F. M. Beatty, Joseph Nichols, Fravanca Venditto, Farfello Tisippio, Antonio Apolick and J. H. Everson, also Carl R. Hunter, who since died, and injuring Joseph Blaney, Chas. D. Carpenter, Jefferson Fast, Herchel Everson, Thos. Mainbrdge and Antonio Phillipi.

In order to enable myself to explain and you to more readily understand the existing conditions at the time and place, I forward you under separate cover a "blue print" of the workings, and on which I have endeavored to mark course of air current, location of the bodies when found, the direction traveled by force of explosion, the place where fire damp has accumulated, the position taken by "shot firer" when firing shot, together with location of the shot, which, in one sense, was the primary cause of the explosion. Having learned no special designation of the place in question, I will designate the point of accumulation as (1) and so on in regular order, as I have cause to mention them and begin my report by stating that, while on the train going to Worthington to inspect the mines at that place, I was informed of the disaster and made every effort to reach the scene. The shaft was reached at about 1:30 p. m. Found the air course rendered useless by the force of the explosion having found its way up the air shaft and completely demolishing that portion of the fan-building immediately over the shaft. The injured were found to have been taken to their homes. The bodies of the dead had been recovered and taken to an undertaking establishment, with the exception of that of Antonio Phillippi, who up to this time, had not been found, but who after a search of some two hours was discovered among the debris of the shattered air shaft bottom. On approaching the immediate scene of the explosion but little if any "after damp" was encountered, for the reason that some hours had elapsed since the explosion had occurred. Also that the large air compressor was at work on the outside and every working place is followed by a 2-inch pipe, which carries the air power to the coal-cutting machines, and were with very few excep-

lions emitting air into the working faces both at the time of and after the explosion had taken place. Advancing along the intake from airshaft (for the fan worked on plenum system) when (1) was reached much heat was encountered, and it was soon apparent that the rib corner marked (2) and the surrounding bottom, wood road and road bed were in the same condition. It was also noticed that the gas had reaccumulated in (1), bringing it in dangerous proximity to the fire. Fearing that application of water might create a flash, canvases thoroughly soaked with water were spread over the burning coal and bottom and water applied until the fire abated to such an extent as to enable the use of picks and shovels, in digging off and shovelling away the same. When extinguished temporary brattices were built. All being in readiness for the circulation of the current, the workmen were taken out of the mine, when it was found that the reconstruction of the fan-building as instructed was under way and nearing completion. When ready fan was set in motion at a very low rate of speed, and all persons kept away from up-cast shaft; when considered safe the speed was increased and the fan allowed to run an hour, when the party re-entered the mine, when a general exploration was made for the purpose of discovering the cause.

The main intake aircourse was again traversed and (1) reached again, and it was found to be a place driven heading width, 50 feet in length, at right angles, with the course of main intake, at this point it was found to be turned to a course of about 50 degrees off course of main and intended to connect with place marked (3) on blue print; here it was 20 ft. wide and had fallen and had been abandoned.

Fire damp was known to be generated here, and for the purpose of keeping it clear a two-inch pipe 70 ft. in length into and on the fall was laid. From evidence adduced and other information gained it was learned that it was a general understanding that gas existed in this place, as a danger signal 3 ft. from mouth of place gave warning. It was also learned that the valve in the pipe was supposed to be partly open at all times to dilute the mixture in this room until (3) would be driven to connect, when there would be a circulation. Other evidence given pointed to the fact, that when compressed air pressure became low the machine operators closed this and other valves for the purpose of obtaining sufficient power for their machines. There is no doubt but that this reckless practice was applied to the air at (1) on the morning of the disaster. The generation being steady and above the average, the very moment the air was taken off, accumulation began, filling the place at the fall at first, then backing, by the compression of the generation force, little at a time until finally it filled (1) to its utmost capacity, back over the danger mark to the very mouth. Then came a compression of this body from both ends, on one the intake volume of air passing prevented its coming out and on the inside the continuous generation kept crowding it against the air. At this time and under those circumstances, two men, Italian coal loaders, were loading coal at (4). When Chas. Johnson and F. M. Beatty, machine runner and helper, entered this heading one of them carried a naked light and the other a safety. The naked light was left on the bottom close to the rib at the point (*), and they proceeded to

the face of (3), where they were joined afterward by Jeff. Fast. The valve at (3) was opened at this time, and while it is not known that gas was found here at this time, it is reasonable to believe that it was, for the valve had been closed and it was opened presumably for the purpose of clearing the place while the machine was being prepared and placed in position to work. How reasonable then to suppose that when this air was turned on if any accumulation there was to be forced gradually back to (*), particularly so when the full valve was turned on to the machine its exhausting became almost a compressor within itself. Now, when it arrived at (*) it could go no farther, for the reason that it met the main volume of ventilation as compressed from the fan. The result then was a compression in this heading from the point (*) to (3), at (*) from the main current and at (3) from the force of machine. It is very plain to be seen that if for any reason the fan would be suddenly stopped, the pressure at one end of both (1) and (*) would be relieved, and, as a result, the pressure, or I may say the counter pressure, would suddenly force out the air and gas that had been confined. This being the condition at this section, your attention is respectfully called to points marked (5) and (6) respectively, (5) representing the position of "shot firer," who, by the way, used a battery, as all blasts are made with dynamite in this mine, a grade of 20 per cent. being used, (6) is where the blast was made.

Joseph Blaney, an experienced and intelligent miner, is the "shot firer," and gave as his evidence, when sworn, the following testimony, "I work with or by the use of safety lights at any and all times; entered 5, 6, 7 and 8; examined them carefully, found no gas in either and there was positively no naked lights in either; proceeded to (6), charged a blast there, fell back to (5), where battery stood, connected wire, fired shot and explosion followed almost instantaneously." Now, going back again to (1), and noting the course of current from this point to (A) and taking into consideration the course naturally traveled by the concussion produced by this shot, which was heavy as two rib holes were fired at once, it can be readily seen that it was exactly or directly against the current. Now, then, this resulted in a clashing of the two forces, the concussion for the time it lasted was stronger and more sudden, but its force was exhausted by the resistance offered by the current. Its effect on the current, however, caused a sudden check, creating a swaying or vibration, in which interim the pressure was relieved at (1) and (*), but the strength of concussion was spent; the current recovered itself and carried the escaping gas to the naked light. The bodies recovered in 3 showed not the slightest evidence of having been burned, while Blaney was severely burned at (5), 300 ft. away. The question might occur, why, if (1) was the place where explosion happened, Blaney, 300 feet away, was burned where there was no gas; why others who were in much closer proximity were not? In reply to which I will endeavor to explain the conditions that, in my opinion, made possible those results. Looking at the map again, we find that the point A is in a direct course with the mouth of (1). The accumulation in (1) was the explosive power. Let us imagine the force derived from the explosion as the projectile driven

from the mouth of (1). Is it not a reasonable supposition that it would be driven in a straight direction to A? Here it meets the resistance of a solid block of coal 125 feet thick, the very high momentum at which this power traveled and the enormous and overpowering resistance the coal offered could have but one result, that of deflection, which occurred here, the force splitting one portion to the right to (5), carrying with it a sheet of flame and burning Blaney. The direction to the left being toward the two shafts, affording a means of escape and offering comparatively little resistance, the major portion of the force turned in that direction, in fact, it is doubtful whether anything more than the flame that was thrown off by the shock of resistance went to (5), for the reason in the first place, no means of escape was offered it in that direction, and again, there was no evidence of force at that point after the explosion. The battery used, also the reel on which the wire was wound, were found standing in an upright and undisturbed position. Following the deflection to the left, we find it went by (B) to (S) at shaft and went up; at (B) we find it split again, however, and the portion traveling to right or to upcast shaft overtook and seriously burned and otherwise injured Chas. D. Carpenter at (C), (Carpenter was Blaney's helper and was returning to supply house); and thence to door (D), blowing it out; then to lamp house (E) and to upcast shaft. Again returning to (1) we find the point that suffered greatest is point of pillar (2), showing the first split of the main force due to two causes, first, by the enormous expansion that took place when ignition occurred, rendering heading from (1) to (A) impossible to contain it, again from (1) to S was the shortest cut and most direct route to airshaft, where we find another split caused by expansion, all that could, passing up the air shaft the other portion going through and tearing down regulator at (G), turning to the right, where it fatally injured Driver Carl Hunter at (H), and connecting with other main split of force and up main or upcast shaft. The force of the explosion spent, we find the resulting residue (after damp) stronger in (1) and vicinity than in any other part, for, as the force has traveled it carried its smoke and gasses with it, but (1) was like the smoking muzzle of a gun. The destruction of the air course had rendered the fan useless, consequently there was no current. The "after damp" remained stagnant at that point between the men in (3) and the avenue of escapes and assistance. Those men had beyond doubt suffered greatly both from fright and concussion and had struggled for life until overcome to a helpless condition by this poisonous residue and died before help arrived. Having endeavored by observing the condition with what little knowledge my past experience has taught me, the evidence produced at Coroner's inquest, together with what other information obtained that could be considered reliable, I respectfully beg leave to state that to the best of my knowledge that it was an explosion of Fire Damp, caused by an accumulation in (1) by shutting off the compressed air in that place and the use of naked light.

And now having reached a conclusion as regards the disaster, and for the purpose of the prevention of a repetition of such an occurrence, I feel compelled to call your attention to the system of opening here, which

I consider extremely faulty, for the reason that the method employed renders the pillars so unwieldy as to make proper and easy ventilation impossible. While appreciating the fact that the matter in view with the management has been to leave sufficient thickness of pillar to support with abundant safety their shaft bottom and the approach to it, and while admitting it to be a very wise and commendable precaution, I am of the firm opinion that the system as already worked and shown on map of prospective workings can not fail of being dangerous and consequently very unsatisfactory from a standpoint of safe ventilation. This, in my opinion, is sufficient ground for the general condemnation of such a system in a mine generating explosive gas, and again there is no apparent reason why sufficient strength cannot be maintained and at the same time have a compact and complete ventilative system. This working, as I see it, is but a slight improvement upon the single entry system. Instead of having a scattered system with large pillars between each place, requiring the driving of 200 feet ahead of air, why not have compact sections with reasonable pillars between working places, facilitating the ventilation and large pillars kept uniformly between sections, whereby the ventilation can circulate around them in the main air courses and return them to the fan independently. Having as a result safer ventilation, purer and with much less expense. With this system of opening one split of air could be brought through one, two or more sections, for when the current had passed through a place next to large pillar it would come out on the main air course and travel it until it came to the place that served as intake for the next section and so on. In gaseous mines, however, a split should be used for one section and returned. I have made these recommendations, and am going to insist upon their adoption or some such other plans as I consider safe.

After the inquest I, in company with Fire Boss and several workmen, re-entered the mine for the purpose of re-establishing the air course, and after directing them as to commencing the work I left them with the Fire Boss and repaired to the point of ignition for the purpose of finding something that would throw some light or assist me in arriving as to who fired the gas. I was rewarded in my search by finding the naked light lamp right at the point designated *, which sketch will show. I spent four days there in all, and went back again in the following week and except to see the place to-morrow again. I had been there on the 11th inst., and left instructions with Mine Boss as to the care required and to changes that should be made.

Trusting that I have not tired you, and hoping that you will be able to understand what I have tried to explain, I am,

Very respectfully,

T. E. THOMAS.

Mine Inspector First District.

Following is the verdict of the Coroner's inquest, followed with names of persons killed and injured in the above explosion:

State of West Virginia, County of Marion, to-wit:

An inquisition taken at Farmington, in the said County of Marion, on 15th and 16th days of May, 1901, before T. A. Fleming, Coroner of said County, upon the view of the bodies of F. M. Beatty and seven others, whose names are written on the margin hereof, (namely, Joe Nichols, J. H. Everson, Franvaunca Venditto, Farfelo Tisipio, Antonio Apolick, Carl R. Hunter, seventh name not given) there lying dead. The Jurors, sworn to inquire when, how, and by what means the said F. M. Beatty and the seven others came to their deaths, upon their oaths, do say: We, the jury, find that the said F. M. Beatty and the seven others named, came to their deaths by an explosion, on May 15th, 1901, in the George Creek Coal Mines near Farmington, caused by the firing of a shot by Joseph Blaney or by an open lamp used by one of the men employed in said mines, which ignited the dust or gas.

(Signed by)

T. A. FLEMING,

Coroner.

I. J. DENT,

MILTON TENNANT,

C. L. LOUGH,

O. L. WILSON,

J. M. HAMILTON,

E. TOOTHMAN,

Jurors.

The following is a list of persons killed and injured in the above explosion as given by the Coal Company.

No.	NAME.	Nationality	Age	Occupation	M. or S.	Date of Death.
<i>Fatalities.</i>						
1	Geovanni Venditti.....	Italian.....	...	Miner.....	S.	May 15th.
2	Brasso Antonio.....	Italian.....	...	Miner.....	...	May 15th.
3	John H. Everson.....	American..	40	Miner.....	M.	May 15th.
4	Carl R. Hunter.....	American..	28	Driver.....	M.	May 15th.
5	Joseph L. Nichols.....	American..	40	Miner.....	M.	May 15th.
6	Maynard Beatty.....	American..	30	Miner.....	M.	May 15th.
7	Dono Alferi.....	Italian.....	30	Laborer.....	S.	May 15th.
8	Goekoro Pugliese.....	Italian.....	...	Miner.....	...	May 15th.
9	Antonio Pugliese.....	Italian.....	...	Miner.....	...	May 15th.
10	Jefferson D. Fast.....	American	Miner.....	M.	May 25th.
<i>Non-Fatalities.</i>						
1	Joseph Blaney.....	Scotch.....	...	Miner.....
2	Hirschel Everson.....	American	Laborer.....
3	Chas. D. Carpenter.....	American..	...	Laborer.....
4	Chas. Johnson.....	Sweede	Miner
5	Ralph Desipio.....	Italian.....	...	Miner.....

PART III.

ADMINISTRATIVE.

CHAPTER XV. INSPECTION DISTRICTS.

The State Legislature during its session in 1901 enacted a law providing for five district Mine Inspectors and authorized the Chief Mine Inspector and the Governor to divide the State into five mining districts. In pursuance with the requirements of law the following order of division and assignments were made:

MINING DISTRICTS OF WEST VIRGINIA AND INSPECTORS' ASSIGNMENTS.

MAY—1901.

James W. Paul, Chief Mine Inspector, Charleston.
 T. E. Thomas, Inspector First District, Clarksburg.
 Earl A. Henry, Inspector Second District, Clifton.
 Edward Pinkney, Inspector Third District, Montgomery.
 Wm. J. Preece, Inspector Fourth District, Coaldale.
 *Jerry Meade, Inspector Fifth District, Wheeling.
 Jerry Westlake, Inspector Fifth District, Elm Grove.
 Italicized counties embrace operating coal mines.

COUNTIES.	MINES.	DISTRICT.	INSPECTORS.
Braxton	First	T. E. Thomas.
Doddridge	First	T. E. Thomas.
Harrison	36	First	T. E. Thomas.
Lewis	First	T. E. Thomas.
Marion	20	First	T. E. Thomas.
Monongalia	2	First	T. E. Thomas.
Ritchie	First	T. E. Thomas.
Webster	First	T. E. Thomas.

Total Mines 58

COUNTIES.	MINES.	DISTRICT.	INSPECTORS.
Brooke	4	First	Jerry Westlake.
Hancock	3	First	Jerry Westlake.
Ohio	7	First	Jerry Westlake.
Marshall	4	First	Jerry Westlake.
Pleasants	First	Jerry Westlake.
Tyler	First	Jerry Westlake.
Wetzel	First	Jerry Westlake.

Total Mines..... 18

*Deceased.

COUNTIES.	MINES.	DISTRICT	INSPECTORS.
<i>Barbour</i>	7	Fifth	Jerry Westlake.
<i>Berkeley</i>		Fifth	Jerry Westlake.
<i>Grant</i>	1	Fifth	Jerry Westlake.
<i>Hardy</i>		Fifth	Jerry Westlake.
<i>Hampshire</i>		Fifth	Jerry Westlake.
<i>Jefferson</i>		Fifth	Jerry Westlake.
<i>Mineral</i>	8	Fifth	Jerry Westlake.
<i>Morgan</i>		Fifth	Jerry Westlake.
<i>Pendleton</i>		Fifth	Jerry Westlake.
<i>Preston</i>	11	Fifth	Jerry Westlake.
<i>Randolph</i>	3	Fifth	Jerry Westlake.
<i>Taylor</i>	7	Fifth	Jerry Westlake.
<i>Tucker</i>	9	Fifth	Jerry Westlake.

Total Mines..... 46

18 mines in 1st district.

64

COUNTIES.	MINES.	DISTRICT	INSPECTORS.
<i>Cabell</i>		Second	Earl A. Henry.
<i>Calhoun</i>		Second	Earl A. Henry.
<i>Clay</i>		Second	Earl A. Henry.
<i>Gilmer</i>		Second	Earl A. Henry.
<i>Jackson</i>		Second	Earl A. Henry.
<i>Kanawha</i>	59	Second	Earl A. Henry.
<i>Lincoln</i>		Second	Earl A. Henry.
<i>Mason</i>	8	Second	Earl A. Henry.
<i>Putnam</i>	3	Second	Earl A. Henry.
<i>Roane</i>		Second	Earl A. Henry.
<i>Wirt</i>		Second	Earl A. Henry.
<i>Wood</i>		Second	Earl A. Henry.
<i>Fayette</i>	8	Third	Earl A. Henry.

Total Mines..... 78

COUNTIES.	MINES.	DISTRICT.	INSPECTORS.
<i>Fayette</i>	92	Third	Edward Pinkney.
<i>Greenbrier</i>		Third	Edward Pinkney.
<i>Monroe</i>		Third	Edward Pinkney.
<i>Nicholas</i>		Third	Edward Pinkney.
<i>Pocahontas</i>		Third	Edward Pinkney.
<i>Raleigh</i>	6	Third	Edward Pinkney.
<i>Summers</i>		Third	Edward Pinkney.

Total Mines..... 98

COUNTIES.	MINES.	DISTRICT	INSPECTORS.
Boone	Fourth	Wm. J. Preece.
Logan	Fourth	Wm. J. Preece.
Mercer	13	Fourth	Wm. J. Preece.
Mingo	12	Fourth	Wm. J. Preece.
McDowell	42	Fourth	Wm. J. Preece.
Wayne	Fourth	Wm. J. Preece.
Wyoming	Fourth	Wm. J. Preece.

Total Mines..... 67

By reason of the large number of mines in the First and Third Districts the Inspector of the Fifth District has been detailed to inspect the mines in the Counties of Brooke, Hancock, Ohio and Marshall, and the Second District Inspector has been detailed to inspect the mines north of the Kanawha and west of the Gauley Rivers in Fayette County.

This plan is in effect July 1, 1901.

Districts arranged by

JAMES W. PAUL, Chief Mine Inspector.

Approved by

A. B. WHITE, Governor.

CHAPTER XVI. MINE RULES.

In view of the legislation enacted amending the mining law requiring the posting of rules at the mines the following letter was addressed each of the operators in the State:

OFFICE OF THE CHIEF MINE INSPECTOR,

STATE OF WEST VIRGINIA,

CHARLESTON, March 28, 1901.

To the Mine Operators and Miners of the State of West Virginia:

GENTLEMEN:—The Legislature in regular session, during January and February, 1901, enacted some mining laws of such importance that the attention of the coal mine operators and miners should be drawn thereto. The present mining law was amended in several instances and two new laws were enacted.

The amendments to which attention is drawn are:

1. Breakthroughs shall be made in the pillars every one hundred feet, or brattice shall be used so as to properly ventilate the mine.

2. In mines generating fire damp all stoppings shall be substantially constructed and made as nearly airtight as practicable.

Cautionary notices shall be posted warning persons against entering abandoned parts of the mine, and it is unlawful for persons, without authority, to enter such abandoned parts.

3. No miner shall take into any mine a greater quantity of explosives than is required for any one shift of twelve hours.

4. At mines generating fire damp in dangerous quantity, a fan, or its

equal thereof, shall be used for ventilation, and the fan, or other power, shall be kept in operation day and night unless written permission be granted by the Chief Inspector or the District Inspector; but this shall not apply where it is necessary to shut down the ventilating power for repairs.

5. After a miner has exploded as much as sixty cubical inches (2 1-2 lbs.) of powder in any one shot in any mine which generates explosive gas he shall not enter the working place and attempt to resume work with a naked light in less than twenty minutes after the blast.

6. A "fire boss" shall be employed at mines generating fire damp or other dangerous gases. He shall be a citizen of the State, having a practical knowledge of mine ventilation and a knowledge of fire damp and he shall have had at least three years' experience in mines generating fire damp and dangerous gases.

The fire boss shall adopt some intelligent plan to warn and give notice to all employes when they may be permitted to enter the mine. In the performance of his duties the "fire boss" shall have no superior officer.

7. It is unlawful for any person to enter a gaseous mine for any purpose at the beginning of work upon each shift until such signal or warning has been given by the fire boss on the outside of the mine.

8. On all haulways, at distances not to exceed one hundred feet apart, space not less than ten feet long and two feet, six inches, wide between the mine car and the rib of the coal shall be kept open.

9. On the front car of every trip or train of cars, when in motion in a mine, a conspicuous light shall be carried.

10. At every mine where fifty men are employed underground, the operator shall keep on hand at the mine a properly constructed stretcher, a woolen and a waterproof blanket. At mines employing as many as one hundred and fifty men, two stretchers and two blankets shall be kept.

NEW LEGISLATION.

Oil.—Chapter 31 of the Acts of 1901 requires that no blackstrap or kerosene oil or mixture of the two shall be used in miners' torches inside of any mine, but only such oil or oils as are as free from the evolution of smoke as a Standard Cottonseed oil shall be used in miners' torches in coal mines. The Standard Cottonseed oil shall be free from mineral oil and shall not exceed 24 degrees Tagliabue hydrometer at 60 degrees Fahrenheit, etc., etc.

To conform with this oil law each operator should provide himself with a small quantity of the "Standard Cottonseed" oil and when purchasing oil the same should be sampled and burned in a miner's lamp alongside of a lamp burning the "Standard Cottonseed" oil. The difference in the amount of smoke produced will determine whether the oil complies with the law.

Checkweighman.—Chapter 20, Acts 1901, provides that employes may, at their own cost, station or appoint a checkweighman at the place where the products of their labor are weighed for the purpose of determining the amount of wages due the employes. Such checkweighman shall in

all cases be appointed by a majority ballot of the workmen employed at the works where he is appointed to act as such checkweighman or measurer.

The operator shall furnish the checkweighman a check or number and pay the said checkweighman for all coal placed to his check or number the same per ton as is paid to the miners.

SPECIAL RULES.

Section 20, Chapter 106, Acts of 1901, requires each mine operator to adopt, and conspicuously post, rules for the government inside and outside of the mine. In order that there might be some uniformity in the rules adopted at each of the mines it is recommended by the Chief Mine Inspector that the operators in each district meet in conference and outline a set of rules which will conform with the conditions prevailing at the mines in the district. Such rules shall not abridge or be in conflict with the mining laws of the State.

Such rules, when adopted and printed, should have headlines after the following style:

NOTICE!

Rules and Regulations adopted by the for the government and operation of its mine at in County, West Virginia, made in compliance with the requirements of the Acts of the Legislature of 1901, Chapter 106, Section 20, which reads: "There shall be adopted by the operator of every mine in this State special rules for the government and operation of his mine or mines, covering all the work pertaining thereto in and outside of the same, which however, shall not be in conflict with the provisions of the mining laws of this State. Such rules when established shall be printed on cardboard and shall be posted up in the drumhouse, tippie or some other conspicuous place about the mines where the same may be seen and observed by all the employes at such mines, and when said rules are so posted the same shall operate as notice to all the employes at such mine of their acceptance of the contents thereof. And it shall be the duty of each mine operator to furnish a printed copy of said rules to each of his employes when requested by either or any of them."

SPECIAL RULES (1 and 2 Suggested.)

Rule 1. It shall be the duty of each employe of this company to comply with the mining laws of this State.

Rule 2. When "shot firers" are employed to fire all shots, at a given time, in the mines, they shall not fire any shots until all other employes are out of the mines, and then the shots shall be fired, beginning at the one farthest from the intake air current and proceeding against the air current.

Rule 3. Etc., etc., etc.

Adopted and posted on theday of, 190..

In order that the coal companies may have a guide in the adoption of

rules the following abstract of rules adopted by Coal Companies, is furnished:

Duties of Fire Bosses. Rule 1. The fire boss shall, before entering the mine, examine the fan or other power of ventilation and see that it is in good running order. Upon entering the mine he shall erase all marks on the sign board and write the day of month thus: [30]; and before proceeding to examine the mine he shall see that the air current is traveling in its proper course.

Rule 2. On entering the mine at the beginning of work he shall examine the same with a safety lamp and mark the face of all rooms or working places in the following manner: the day of the month, 30, indicates that inspection has been made, and that the room or working place is free from fire damp or dangerous gas.

Two large crosses with the day of the month between them thus: X30X indicates the presence of fire damp or dangerous gases and extreme danger. These marks must be made on a cap piece or other timber and laid in the roadway at the mouth of room or entrance to working place.

Rule 3. After complete examination of the mine has been made the fire boss shall come out of the mine and write upon a board, provided at the entrance, the day of the month and sign his name, and if any part of the mine has been found dangerous he shall write on the board the word XDangerX and the name of the locality where the danger exists, and he shall personally notify the men who work in such places as to the danger and warn them not to proceed to work until he has removed the danger. He shall then proceed to remove the gas in such places and in doing so he shall see that the gas so removed will not be carried onto the workmen in any other part of the mine. Should the fire boss need assistance in removing gas from any section or parts of a mine he shall designate the persons to act as such assistants.

Duties of Mine Boss.—(See Section 11 of the Mine Law.) Rule 4. The mine boss shall comply with the requirements of the mining law of this State and shall familiarize himself with the mining law.

Rule 5. He shall visit each working place in the mine at least once in every three days and direct the miners and other employees in their work and see that his instructions are complied with, and he shall direct the miners to securely prop their working places and see that the miners drive breakthroughs at distances not to exceed 100 feet apart. In the absence of a fire boss he shall have charge of the ventilating machinery or power.

Rule 6. In case the ventilation of the mine should be interrupted by the stopping of the fan or by a fall of the roof he shall immediately instruct all employes to withdraw from the mine until the ventilation is restored.

Rule 7. The mine boss shall have delivered to the miners at their working places all such timber as is required to make the working place safe.

Rule 8. The mine boss shall see that the necessary notices of warning are kept posted at the entrance to all abandoned parts of the mine.

Rule 9. He shall keep a stationary light at the top and bottom of the

shaft and he shall keep the same in good repair and lighted during darkness as long as the mine is being operated or as long as men are in the shaft.

Rule 10. Where the mine is worked by shaft or where a mechanical haulage is used in the mine he shall post in the engine house, at the top and bottom of the shaft and at points along the haulage, the code of signals which shall govern the operation of the machinery.

Rule 11. He shall regulate the time when shots may be fired by the miners and shall see that no greater quantity of powder or other explosive is stored in or taken into the mine than is necessary for one shift of 12 hours, and he shall not permit quantities of oil to be stored inside of the mine.

Duties of Miners.—(See Sections 10, 11 and 14 of Mine Laws.) Rule 12. Miners shall observe every precaution to prevent accidents in or about the mine. They shall not work in an unsafe place when timber would remedy the danger.

Rule 13. Miners shall not take kegs of powder into the mine nor into their houses, but they shall be left in the powder house.

Rule 14. The miner shall each day, before beginning work, examine his working place and take down all dangerous slate, or otherwise make it safe by properly timbering, and he shall always keep on hand, and available, the necessary props and caps for timbering. Should a dangerous condition arise and he be without timber he shall immediately cease work, vacate his working place and report the fact to the mine boss.

Rule 15. No miner or other employe shall be permitted to burn kerosene or blackstrap oil in his lamp within the mine, under penalty of fine and imprisonment by the State authorities.

General Rules.—Rule 16. No person or employe known to be in a state of intoxication shall be permitted to enter the mine, under penalty of prosecution for trespass.

Rule 17. No person or persons shall go into abandoned parts of the mine which have notices posted forbidding entrance unless permission be granted by the mine boss or fire boss.

Rule 18. All persons, except those duly authorized, are forbidden to meddle or tamper in any way with any electric or signal wire in or about the mine.

Rule 19. Persons seeking employment shall secure it outside of the mine.

Rule 20. All persons who ride upon the cars on the incline do so at their own risk.

Rule 21. It shall be the duty of all employes to familiarize themselves with the rules of this company and any employe violating any of these rules will subject himself to dismissal, and in case of accident caused by such violation, to prosecution.

A copy of such rules as are adopted by the coal companies should be furnished the Chief Mine Inspector and the District Mine Inspector.

The Mining Laws in book form may be had from the office of the Chief Mine Inspector by enclosing five cents in currency or stamps.

Respectfully,

JAMES W. PAUL,
Chief Mine Inspector.

CHAPTER XVII. OIL.

The Legislature during 1901 enacted a law regulating the quality of oil to be used for illuminating purposes within the mines of this State. The standard of quality being based upon the smoke producing qualities of the oil when burned in a miner's torch (lamp.)

The full test of this law is given in the appendix.

Considerable trouble may be expected, however, before the users of oil will accept an oil free of the highly volatile oils which have been much in use and which produce large volumes of smoke.

CHAPTER XVIII. OPINION OF ATTORNEY GENERAL.

The amending of section 10 of the mining law so as to make it unlawful to take into the mines any quantity of powder or other explosive in excess of such an amount as is required for one day's work, appeared to be misunderstood by a number of operators, they believing that the provision applied only to mines in which explosive gas was generated.

To satisfy all concerned that the law applied to all mines, an opinion was obtained from the Attorney General of the State through the following correspondence:

CHARLESTON, W. VA., May 31, 1901.

HON. ROMEO H. FREER,
Attorney General,
Charleston, W. Va.

SIR:—Difference of opinion prevails among the operators of coal mines in this State upon the interpretation of section 10 of the mine law as amended by chapter 106 of the acts of 1901 in reference to the clause which reads: "No miner or other employe shall take into the mines in this State any larger quantity of powder or other explosive than he or they may reasonably expect to use during their term of employment of one day of twelve hours".

The question is, does this apply to all coal mines in the State or only to those which generate fire damp (explosive gas) and employing 10 men in 24 hours.

An early opinion will be much appreciated.

Yours very respectfully,

(Signed) JAS. W. PAUL,
Chief Mine Inspector.

OFFICE OF ATTORNEY GENERAL,

CHARLESTON, W. VA., June 12, 1901.

HON. JAS. W. PAUL,

Chief Mine Inspector,

Charleston.

SIR:—Replying to your request in writing for a ruling upon that part of the provisions of section 10, chapter 50, Acts of 1887, as amended by chapter 106, Acts of 1901, which reads: "No miner nor other employe shall take into the mines in this State any larger quantity of powder or other explosive than he or they may reasonably expect to use during their term of employment of one day of twelve hours". Respectfully submit the following opinion:

Section 18 of said chapter says: "The provisions of this Act shall apply only to coal mines in which ten or more persons are employed in a period of twenty-four hours".

After a careful examination of our mining laws it is our opinion, and we so hold, that all the provisions of said chapter 50, Acts 1887, as amended by chapter 106, Acts of 1901, apply to all coal mines in this State, regardless of the fact whether the mines generate fire damp or other explosive or poisonous gases, where they employ ten or more persons in a period of twenty-four hours. In other words, the provisions of said chapter do *not* apply to coal mines in which there are not employed ten or more persons in a period of twenty-four hours, regardless of the fact whether the mines generate fire damp or other explosive or poisonous gases.

Respectfully submitted,

(Signed) ROMEO H. FREER,
Attorney General.

By ALEX DULIN,

Assistant Attorney General.

PART IV.

CONDITION OF MINES.

CHAPTER XIX. INSPECTIONS MADE.

The statistical part of this report has been made to conform with the mining districts as outlined in Chapter XV., but the record of inspections is made to conform with the districts as they existed prior to the recent legislative act which provided for five districts.

INSPECTIONS OF MINES, FOR THE YEAR ENDING JUNE 30, 1901.

James W. Paul, Chief Mine Inspector, Charleston.

*D. E. Llewellyn, Inspector First District, Fairmont.

T. E. Thomas, Inspector First District, Clarksburg.

Jerry Meade, Inspector Second District, Charleston.

Earl A. Henry, Inspector Second District, Clifton.

Edward Pinkney, Inspector Third District, Montgomery.

Wm. J. Preece, Inspector Fourth District, Coaldale.

During the year there were 722 inspections made by the inspectors as shown in the following table:

INSPECTOR	1st Dist.	2nd Dist.	3rd Dist.	4th Dist.	Total.
D. E. Llewellyn	1	1
T. E. Thomas.....	71	71
Jerry Meade.....	48	158	206
Earl A. Henry.....	29	20
Edward Pinkney.....	254	254
Wm. J. Preece.....	174	170
Total.....	120	178	254	170	722

CHAPTER XX. FIRST INSPECTION DISTRICT.

In this district are included the following counties:

Barbour, Berkeley, Brooke, Doddridge, Grant, Hardy, Hampshire, Harrison, Hancock, Jefferson, Lewis, Marshall, Marion, Mineral, Monongalia, Morgan, Ohio, Preston, Pendleton, Randolph, Taylor, Tucker, Tyler, Upshur, Wetzel.

*D. E. Llewellyn was appointed Inspector of the First District, July 2, 1900, and January 15th, 1901, his tenure of office ceased, he having made but one inspection during his incumbency as an inspector.

ANNUAL REPORT OF INSPECTORS.

T. E. THOMAS.

MINE INSPECTOR 1ST DISTRICT,
STATE OF WEST VIRGINIA.

CLARKSBURG, W. VA., Aug. 14, 1901.

HON. JAMES W. PAUL,

Chief Mine Inspector,
Charleston, W. Va.

DEAR SIR:—Pursuant to that section of regulations setting forth the duties of District Mine Inspectors it is my pleasure to respectfully submit to you my report of the First Mining District of West Virginia, which it is my honor and pleasure under your valued direction to represent. Beginning with an apology for tardiness and as an excuse for which fact that, while perfectly aware of the requirement of annual report to the Chief Mine Inspector for the year ending the thirtieth day of June, the writer labored under the impression that for the reason that his period of incumbency had been so brief, as to scarcely enable him in his opinion to render but with limited accuracy an exact or intelligent description or account of the existing conditions at this time, that this section did not apply to his case until June 30th, 1902.

This delusion having been dispelled however by a request of the Chief to render such report necessitates an endeavor to an account of the result of observations made during the time beginning March 13th of this year and ending with the present. Requesting the kind indulgency of the reader and others interested to remember that while placed in a position where competency is expected and required for the best interests of the service and those interested in it, the only claim made is that of an honest effort to serve alike the State, the employer and employe and actuated with no desire whatsoever to attempt at a claim to infallibility, but simply a conscientious criticism of the places and conditions as found and an honest desire to impose censure and give credit where each belong, impartially to all. Trusting that this preface will not be considered as unnecessarily lengthy, I beg leave to remind you that while the present First District comprises the counties of Harrison, Marion and Monongalia, prior to May 1st, there were also included Preston and Taylor Counties and others which are not named for the reason that no collieries within their confines were inspected. This statement is made for the purpose of an understanding that the report will deal with all territory covered and will refer to conditions in some places that do not exist in others, a fact which if not mentioned might result in conclusions that would lead to a spirit of resentment.

During the term of service mentioned 66 operations have been visited once, second and other visits to some collieries to such an extent as to render the total number of visits 112.

In other words, the whole district has been gone over once and partially the second time, some collieries have been visited several times for the reason that in them such conditions exist as to necessitate constant

watchfulness until certain purposes have been accomplished and to this end an effort has been made to keep in touch with them while this work is in progress, with the hope of thereby being instrumental in averting any disaster that might otherwise occur.

Returning to the district generally, observations have taught that all conditions vary, to more or less of an extent, at different mines with one exception, and it is with pleasure stated that this exception is the treatment accorded the Inspector on his visits in the discharge of his duties, that has been uniformly courteous in every instance from the mine owner, mine manager and the employe, without exception. True that recommendations in several instances have not been as promptly and thoroughly observed as was hoped for, but inquiry has revealed the fact that it was not due to obstinacy, or a desire to violate, but rather a lack of appreciation of the necessity of so doing, in some cases, and again the result of a disposition to procrastinate.

A careful examination of the mines in this district from every standpoint of coal mining, both of old and of new sections of collieries which have been in operation for some years demonstrates a marked improvement in every department of the business, particularly is this true when a comparison is made of the old collieries of the past, and the new ones under course of development at present, both exterior and interior, yet with this admitted there is a decidedly wide field for much important improvement, in every line of mine work.

To prove the correctness of this assertion the several defects as noticed will be reviewed in order, beginning with ventilation, the most important factor in coal mining and to this subject belongs fans, furnaces, brattice, stoppings, overcast, stack, cleanliness, doors, splits, etc. Fans are the most reliable, economic and safe ventilating creation known to modern mining, and are in almost exclusive use in the First District. This is a proof of advancement, but many fans here are rendered almost useless from a standpoint of effectiveness, by being carelessly, and I must say, ignorantly erected. Cases can be cited in order to prove this rather blunt assertion where fans have been erected to work as exhaust and received fully one-half their work through their casings without having entered the mine, the engine working industriously, the fan spinning along 90 to 100 revolutions per minute, and suffering humanity needing the pure air that is wasted.

Is that a fan in the true meaning of the word? No. Is it the fault of the fan? No. What then is the fault? The erection and the mine manager, who caused its erection and does not remedy it, is responsible for the conditions. Some furnaces are still in use and give any thing but satisfactory results in any and all cases, for different reasons, in some instances because too small, in others wrongly constructed, resulting in poor ventilation and some time none. Furnace blowing back and the workmen forced to leave a mine filled with coal and wood smoke in order to live. A visit to furnace ventilated mine generally meets with the saying: "The air is not very good, just now, the furnacemen let the fire go down." The conditions existing here then are the company pays to keep the fur-

nace going which is not done, and not any ventilation. Taking into consideration the relative initial cost of both fan and furnace, the cost of maintenance of both, and the difference of production of one miner or all the miners, in good air as against the amount in foul air, is it not reasonable to believe that it would benefit employer and employe to use a fan, the former from a financial point of view and the latter from earnings and health, and at the same time condemn the furnace as a ventilating medium.

The next point so often lost sight of as regards good ventilation is the important necessity of maintaining good strong air tight permanent stoppings, air tight in the first place, to prevent leakage to be sure, to be strong to be permanent and to be permanent to withstand the concussion of shots and rushes of air caused by being suddenly displaced by heavy falls, explosions, etc.

The point in bratticing that should never be forgotten is that the cheapest stopping is the one put in right at first, never requiring patching or tearing down to be relieved by another. The same will apply to doors, and for brattices the traditional canvas should be cast into eternal disuse, except for very temporary purposes. Unfortunately, it is used almost exclusively in the First District, even in some mines generating fire damp in considerable quantity.

Ventilation again; the requirement of the law is that each man should be provided with one hundred cubic feet of air per minute, and in most instances it is complied with, in fact, some collieries can be named where four times the quantity is in circulation. A good fan, good doors, stoppings and every thing else, that tends to carry a strong current through the avenue of the mine in the direction intended until it is cast from the blades of the fan, yet the mine is not ventilated to the workmen's benefit. Why? Because the current is not split and as a result the pure air taken into the mine enters the first section, passes to the next, and so on until it traverses the whole distance, into the return air course. What is its condition then? A contamination to the lungs of man and beast rather than a God-send.

It has become charged with nauseous gases, caused by the combustion of lights, conflagration of powder, breathing of man and beast, together with deposits of decayed vegetable matters along its course. That cannot be considered ventilation, yet many instances of the kind can be found in this district. The remedy is the system of overcast ventilation applicable to all mines whether gasey or not, large or small. Again mines can be found that the overcast system is established. Bridges of a varied cost of from twenty dollars to one hundred dollars each are constructed, a good strong current can be found on the main heading, but enter the cross headings, travel to their face, and return to the bridge, ærometer with all the nicety of its equilibrium cannot be induced to make one single revolution. Why? Because there is no air there and this is a split of a current and the causes are various. In some instances the space over the bridge there is a bridge that cost forty or fifty dollars, and for nothing. is so small that a man could not crawl over it, a contraction of the area,

Again where bridges are properly built with sufficient area over them air does not travel them for the reason that there is a shorter course to the fan, and no regulator placed on it. To what then should this condition be charged? The incompetency of the mine foreman, to be sure. Another feature is the excessive use of powder which tends largely to destroy good ventilation under what may be termed favorable conditions otherwise, and the filling the mine with smoke, and bringing with it attendant evils, for besides keeping the current laden, this smoke has bad effects other than the contamination of the air. Miners in their working faces are rendered unable to see dangerous pieces of roof hanging over them. A smokey heading greatly increases the danger of the driver, particularly so on heavy grades by reason of his horse or mule being unable to see and more liable to fall. This excessive smoke, it has been observed, is largely due to what is known as hard or solid shooting, by men who make no attempt at the proper mining of the coal. A regulation of this matter is considered as urgently necessary, for aside from the matter of smoke mentioned that of wind shots, causing, in many instances, dust explosions, and it would seem that a miner should have no more right to cause one of these shots than the toleration of an accumulation of dust by the management, both being dangerous elements. Again solid shots are destructive to the product of the mine.

Timbering and the lack of timbering are very apparent in many places and can also be placed at the door of the careless mine foreman. Many working places are found where the miner is criminally careless in the standing of posts, and again in his omission of doing so. In the first instance putting them in any shape, and again going twice the distance that safety would warrant. It cannot be believed that the mine foreman, if his statement is to be believed as to his regularity in visiting those places, could fail to see the inefficiency and carelessness in this direction, yet this is the condition that many working places are found in.

Main haulways with roof in very ragged condition apparently receiving no attention, notwithstanding the fact that drivers and others in the discharge of their duties are constantly passing under it.

This is not as it should be, for it is plain to every one that sees it that it is dangerous and liable to result in the death of some one at any time, then it will be timbered when too late and it is caused by the criminal neglect of the mine foreman. It costs less to timber before an accident than after, and certainly must be more satisfactory to all concerned. Another evidence of neglect on the part of the mine foreman is the great amount of this fallen slate that is stored along the main haulways, in some instances reaching hundreds of feet along the entry rubbing the hubs of the mine car wheels and greatly endangering the safety of drivers, not to speak of the limited opportunity it gives the traveler along the heading to get out of the way of passing cars. This is the result of the mine foreman's procrastination and lack of appreciation of the necessity of caring for the safety of the men placed in his care. Another matter so often neglected in many mines is that of drainage. Some mines have been visited where every advantage is offered for a thorough and

perfect drainage, yet the roads are wet and muddy and the driver forced to plod the livelong day in mud and water, ankle deep, pools of water here and there, completely inundating the roadway for several feet. All these conditions are not found at any one mine to be sure, but some of them in many, to more or less of an extent. Yet it is but fair to state that there are mines in this district where none of them exist, which reflects much credit on the management, mine boss, etc.

Feeling conscious of the fact that finding fault is frequently easier than to apply a remedy, or performing faultlessly those things yourself, I beg leave to state that it is through no desire at fault finding that those facts are mentioned, but simply to give a truthful account of conditions as found for the purpose of improvement in the future, and to further that purpose I would heartily recommend for the best interest of the service a detailed regulation of the following:

1st. A requirement of an examination of mine foremen, assistants, fire bosses.

2nd. A requirement for the adoption of the overcast system in all mines, whether generating explosive gas or not, setting forth the maximum number of men to be employed in each split.

3rd. A requirement of the keeping of an aerometer at each colliery and the measurement of the current by mine boss once every week, the result to be reported on a form made for that purpose and mailed to district Mine Inspector.

4th. Forbidding and fixing penalty for solid shooting and the firing of two shots simultaneously when not on solid.

5th. Requiring miner while handling powder to keep light at a prescribed distance from him.

6th. Requiring the maintenance of necessary support over miners undercutting in pick mining.

7th. Fixing penalty for neglect on part of miner to post when necessary.

8th. Prohibiting absolutely riding on any car loaded or empty except where management agrees to haul men to and from their working places.

Those suggestions I believe will if adopted prove of considerable value to both employer and employe and tend to decrease the number of accidents, together with insuring a more healthy condition to miner and others employed underground.

Hoping them to be in order, I beg leave to report the following:

COUNTIES	MINES.	NO. MEN.	VISITS.
Harrison	31	1,638	58
Monongalia	2	115	2
Barbour	1	214	1
Taylor	2	230	2
Preston	9	592	9
Marion	21	2,730	40
<hr/>			
Total	66	5,519	112

Only one of the mines in Barbour county visited for the reason that it was learned that the late Jerry Meade had done so but a short time before. In Taylor county; Flemington, Tyrconnell and Sandlick were visited three times each but found idle each time.

Respectfully,

T. E. THOMAS.

COUNTIES.	No. of Openings.	EMPLOYES.							PRODUCTION.	
		Inside.				Outside.			Coal.	Coke.
		Pick Miners.	Machine Miners.	Laborers.	Total.	Laborers.	Coke Men.	Total.	Tons of 2,240 Lbs.	Tons of 2,000 Lbs.
Barbour.....	7	127	165	112	404	80	9	89	226,047	12,666
Brooke.....	4	100	18	118	18	18	65,904
Hancock.....	3	43	13	56	13	13	30,357
Harrison.....	36	716	404	389	1,509	280	6	286	1,088,715	5,190
Marion.....	20	1,174	580	642	2,396	385	142	527	2,674,553	118,285
Marshall.....	4	148	75	63	286	36	36	199,633
Mineral.....	8	496	15	68	579	79	79	513,772
Monongalia.....	2	65	17	82	12	12	24	75,589	5,777
Ohio.....	7	157	29	186	15	15	115,830
Preston.....	11	356	92	70	518	45	20	65	434,713	6,500
Randolph.....	3	126	30	70	226	25	8	33	167,883	18,498
Taylor.....	7	401	100	115	616	78	78	383,223
Tucker.....	9	777	30	214	1,021	52	196	248	938,304	176,392
Grant.....	1
Totals.....	122	4,686	1,491	1,820	7,997	1,118	393	1,511	6,914,523	338,308

Total men employed inside of mine..... 7,997
 " " " outside of mine..... 1,511

Grand total employed..... 9,508

CONDITION OF MINES IN THE FIRST DISTRICT

as Reported by Mine Inspector T. E. Thomas. of the First District, and
 Jerry Meade of the Second District.

CONDITION Reported by Jerry Meade. Mines in BARBOUR COUNTY.

THE SOUTHERN COAL AND TRANSPORTATION COMPANY.

No. 5.

BERRYBURG MINE.

This mine is located at Berryburg on a branch line of the B. & O. R. R. which leaves Belington division at a point miles north of Philippi at the confluence of Hacker's Creek and Tygart's Valley River, and six miles distant from the River.

The mine consists of two drift openings, one of which runs due south and is known as the South Mine, the other running due west and is known as the West Mine. These two drift openings are connected by a tunnel, which in turn connects with a slope at the mouth of which is located the ventilating fan.

On January 22, 1901, this mine was inspected and the ventilation, the

condition of the roof, the general safety and drainage of working places, the condition of ropes and all machinery and refuge holes were good; the distribution of air, however, was only fair. The mine throughout is dry, these dry sections of the mine are regularly sprinkled with water in order to allay the dust. There is no gas to be found in this mine except where a clay seam is encountered, when sometimes small quantities are to be discovered which soon disappears. By the driving of a break-through immediately after passing a clay seam any gas that may be given off may be readily carried away in the ventilating current. The Fire Boss should govern and control the quantity of powder exploded at any one time in any of the working places and the dry portions of the mine should never be permitted to get dusty.

This Company under-cuts the coal, snoots it down, lays the roads and posts the working places with men hired by the day.

INSPECTION BY T. E. THOMAS.

On April 26, 1901, the ventilation, distribution of air, general safety, drainage of working places, condition of ropes and all machinery was good, and the condition of roof, fair. The coal worked at this mine is the Pittsburg seam which is from nine to twelve feet thick. Two features which characterize this coal within this mine are a general disturbance of the seam by faults of denudation or as usually termed, clay seams, and a comparatively large generation of fire damp in the headings.

Owing to the existence of the clay seams it is found almost impossible to comply with the law which requires cross-cuts at intervals of 100 feet, as it was found that at several places at that interval clay seams were encountered. Every precaution is taken to thoroughly ventilate such places by the construction of brattices to within a few feet of the working faces. The roof is carefully propped and the dust is watered, there being two men that water with a water car, they being regularly employed to sprinkle the dusty sections. The road and roadways are kept clear of dangerous obstructions and the headings are driven of such width as to render travel safe.

The coal is hauled by two 20 ton electric motors a distance of 1,000 feet to the tippie which is of modern design. Four boilers of 150 H. P. each are in use to run the dynamo engine and machinery at the tippie. The fan at present is run by a 60 H. P. electric motor. A stationary steam engine together with a 100 H. P. steam boiler will shortly be substituted. The fan is of Bullock pattern, 12 by 8 feet and works as an exhaust. The generator is a 100 K. W. Jeffrey machines for mining are used.

ED. CHISHOLM, Supt.

C. E. PRIEST, Mine Boss.
RICHARD STURN, Fire Boss.

OTHER MINES IN BARBOUR COUNTY.

The remaining mines in this County were not regularly inspected during the year for reason of the inspector who was assigned the inspection

on the mines in this County and District having failed to make the necessary inspections for which lack of attention he was subsequently dismissed from office.

BROOKE COUNTY.

INSPECTION BY JERRY MEADE.

PANHANDLE COAL COMPANY.

No. 8.

BLANCHE MINE.

On February 7, 1901, an inspection was made of this mine. Ventilation, condition of roof, distribution of air, general safety, condition of ropes and all machinery, good; drainage of working places, refuge holes, man-ways, second openings, etc., fair. Mine doors are in fair condition; roadways, generally good.

This property is in litigation at present and nearly all entries are up against faults and if not driven through it will be but a short time until the mine is abandoned, as a number of pillars are being drawn at present. The Pan-Handle Railroad is taking all the coal that is produced and miners are paid for run-of-mine coal weighed in mine cars.

W. A. WARD, Supt.

THOMAS RITSON, Mine Boss.

GILCHRIST COAL COMPANY.

No. 9.

GILCHRIST.

On February 6, 1901, this mine was inspected and the ventilation, condition of roof and drainage of workings places were good. The distribution of air, general safety and condition of ropes and all machinery, fair. Mine doors are fair. Roadways, generally bad. The break-throughs between rooms are kept up fairly well. Safety blocks at the head of the incline should be put down as soon as possible as the present method of laying a piece of wood across the rails is unsafe and should be abandoned. Mr. Gilchrist's attention was called to this matter.

ELICK GILCHRIST, Supt.

WILLIAM GILCHRIST, Mine Boss.

J. W. M. CARMICHAEL.

No. 10.

WELLSBURG MINE.

On February 6, 1901, an inspection was made of the mine and the ventilation, condition of roof, distribution of air, general safety and the drainage of working places were good. The condition of ropes and all machinery and refuge holes, fair. This mine is in good condition so far as air and drainage are concerned, except on a short butt entry from which four rooms are being turned. The air in these rooms will be close until they are connected by break-throughs. The roadways are generally good and the mine doors in fair condition.

The lease now held by Mr. Carmichael will expire on April 1st next, and he does not know who will operate the mine after that date. Mr. Car-

michael was requested to have a survey of the mine made and the map extended to the expiration of his lease.

J. W. M. CARMICHAEL, Supt.

POSEY CHEEK, Mine Boss.

BROWN COAL AND COKE COMPANY.

No. 11.

BIG FOUR OR BOWMAN MINE.

This is a drift mine reached by an incline about 700 feet long and was opened about January 1, 1900. The main entries are driven about 500 feet through old workings which are well timbered. Most of the coal which is being taken from this mine is crop coal and pillars from the old workings. The ventilation of the mine, condition of roof, general safety, drainage of working places, condition of ropes and all machinery only fair and distribution of air, bad. The foregoing being the condition in which the mine was found upon the inspection made February 5, 1901. It was suggested that the entry where the rooms are being worked be kept in a safe condition and utilized as a second opening. The safety blocks at the head of the incline were not in the best condition and it was suggested that efficient safety blocks be installed which could be worked with a hand lever. This mine was again inspected on June 22nd and found to be in better condition than on previous inspection. A second opening had been driven, but there was a great deal of water in it. The air was fairly good, but the roads were wet and muddy. The old workings that were being driven will soon be abandoned and rooms will be opened in the solid coal which will make a considerable change for the better.

GEO. K. COLBURN, Supt.

DANIEL YOUNG, Mine Boss.

HANCOCK COUNTY.

MARQUET COAL COMPANY.

No. 13.

MARQUET MINE NO. 1.

The date on which this mine was inspected, February 8, 1901, the ventilation of the mine, condition of roof, condition of ropes and all machinery were good. The general safety, drainage of working places, fair. Distribution of air, bad. This mine is in fairly good condition for air and drainage. Mine doors in fairly good condition; roadways, generally good. This mine is worked on the single entry system, and doors made of brattice cloth hung in the neck of each room, as well as on the main entry are used to direct the ventilation. After this brattice cloth is in use for a while the tar becomes soft and wears off and leaves the cloth quite open and permits a large waste of air. Break-throughs between rooms are being kept up.

GEO. MARQUET, Supt.

WILL HOLMES, Mine Boss.

MARQUET COAL COMPANY,

No. 14.

MARQUET MINE NO. 2.

On February 9, 1901, this mine was inspected. Ventilation, condition of roof, general safety, drainage of working places, condition of ropes and all machinery, good. The distribution of air is only fair; the roadways and doors are in fair condition. This mine was opened during the fore part of 1900 and is being worked on the single entry system, at present, but the double entry system was recommended as a better plan, which may be adopted later. The coal seam here runs from four and one-half feet to five and one-half feet in thickness. The air is quite close at the head of the entries for the reason that the circulation can not be gotten to the face of the entries except where the rooms are broken through. Mine doors and brattices are in poor condition, as they are nearly all made of brattice cloth, which becomes almost useless after being in use only a short time.

GEO. MARQUET, Supt.

HUGH SUTHERIN, Mine Boss.

JAMES PORTER.

No. 15.

PORTER MINE NOS. 1 & 2.

On February 8, 1901 this mine was visited. This mine was purchased by Mr. James Porter from Mr. D. C. Glass, and is working about four men, at present, but expects to work many more within a short time, and will no doubt shortly come within the jurisdiction of the Mining Law. No detailed inspection was made of this mine.

M. M. CULLEN, Supt.

HARRISON BAILEY, Mine Boss.

McELFRESH CLAY MFG. COMPANY.

McELFRESH MINE.

No regular inspection was made of this mine during the year. During the first week in August, 1900, the return air course took fire, near the furnace, and Mine Inspector D. E. Llewellyn, was called to the mine. This mine was being ventilated by means of a small furnace which had an outlet through a 24 inch sewer pipe, which extended 40 feet above the surface of the ground and 70 feet above the level of the coal. Mr. Llewellyn went to the scene of this fire and gave directions by which it was successfully extinguished. Instructions were given to make a second opening to this mine through which it would be possible for employees to pass.

HARRISON COUNTY.

CONDITION REPORTED BY T. E. THOMAS.

MINES IN HARRISON COUNTY.

WORTHINGTON COAL AND COKE COMPANY.

No. 16.

MELROSE MINE.

This mine was formerly the Coulson and is now known as the Melrose or Worthington No. 2.

On May 14, 1901, an inspection was made of this mine. The ventilation, distribution of air, general safety, drainage of working places, condition of ropes and all machinery were good. Condition of roof was bad; the distribution of the air was only fair; the roof in this mine is anything but good, as a clod of from 8 to 10 inches overlies the coal between the seam and the main roof which disintegrates around the posts and comes down. The thickness of the seam being quite thin here it does not allow the maintenance of head coal consequently it is impossible to hold the clod. Every effort and precaution are taken in propping and rendering the roof safe.

M. L. HUTCHINSON, Supt.

C. L. FORTNEY, Mine Boss.

GLOBE COAL AND COKE COMPANY.

No. 17.

FARNUM MINE.

This mine is a drift, reached by an incline about 150 feet in length, immediately to the north of Farnum station on the B. & O. R. R.

On April 9, 1901, this mine was inspected. The ventilation as regards quantity and circulation was fair and the same may be said of the distribution of air. The condition of roof was very bad as many places noticed where head coal and over-lying soapstone were broken and very unsafe to travel under. It was also noticed that props furnished for room purposes were entirely too small, some being about 4 inches in diameter, supporting large pieces of this clod 18 inches thick. The seam here being 9 feet in thickness requires a prop of that length and should be at least 7 or 8 inches thick. Attention was called to this fact; also to the careless manner in which timbers were set, in many places 7 or 8 inches out of plumb. Some sections of this mine, which go to the dip make considerable water in the working places, however, those places were idle, other sections of the mine were found to be dry and dusty. There is no second opening at this mine as required by section 6 of the Mining Law. Instructions were given to have this violation attended to at once.

A. B. SCOTT, Supt.

J. H. BERNON, Mine Boss.

PINNICKINNICK COAL COMPANY.

No. 18.

PINNICKINNICK MINE NO. 1.

On March 20, 1901, an inspection was made of this mine. The ventilation was very good; the air being judiciously distributed to all sections; the drainage was especially good for a mine making so much water with the exception of two headings, which were being driven to develop new territory and to the dip. No water was found in the roads or in the working faces. At the face of these two dip headings pumps were in operation for the purpose of keeping the water from the men. The top over the coal here is only fair. Riders of draw slate intervening between the coal and the main roof, the places are, however, well timbered. The headings on either side are kept clear of slate making travel safe and greatly facilitating the work of the drivers. The Company in the past.

year has erected one of the finest tipples in the field, together with a splendid endless rope haulage. The haulage system consists of 3,700 feet of wire rope, 2 boilers, 72 inches by 16 feet of 100 H. P. each; 1 150 H. P. haulage engine; 1 25 machine Ingersoll-Sargeant Compressor; 1 18 feet by 5 feet Cole fan operated by a 13 H. P. engine driven by compressed air.

The seam worked is the Pittsburg coal, 9 feet thick. The doors within the mine are not self-closing, which is the only fault noticed in this mine.

J. H. CLIFFORD, Supt.

MATHEW MANNIX, Mine Boss.

PINNICKINNICK COAL COMPANY.

No. 19.

PINNICKINNICK MINE NO. 2.

This mine was inspected on March 25, 1901. The main heading of this mine is practically a continuation of Pinnickinnick No. 1 main heading, and answers the purpose of an outlet for travel in case of an emergency and is an intake for the air current. These conditions render these mines as a single mine. The only difference being that the production of the Mine No. 1 is handled on the Parkersburg Branch of the B. & O. while the other is handled on the Monongahela River Division. This mine was found to comply with the Mining Law in almost every particular. The work on this side of the property (Mine No. 2) being to the rise the drainage requires little if any care. The roadways were found to be clean, room in abundance on either side of the heading on every point to insure safety in travel.

J. H. CLIFFORD, Supt.

FRANK FLAHERTY, Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 20.

BRIAR HILL MINE NO. 1.

This mine located at Farnum on the B. & O. R. R., is a drift reached by an incline 150 feet long. The coal mined is the Pittsburg which at this place is 8 1-2 feet thick.

On April 9, 1901, an inspection was made of this mine. The mine is ventilated by natural means which were found to be insufficient to the needs of the men employed, so apparent was this fact that it was not deemed necessary to make any actual measurement of the quantity of air in circulation. It was suggested that a furnace be erected at once. A heading which was being driven to the out-crop which was within 20 feet of being out will probably relieve the situation somewhat but not to the extent of giving entire satisfactory results. The drainage of working places was good as was also the condition of the roof. The working places were carefully propped and there was an ample supply of material for this purpose. A clear second opening is had at this mine.

H. H. WATSON, Supt.

B. J. McANDREWS, Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 21.

ENTERPRISE NO. 3.

This mine located at Enterprise on the Monongahela River Division of

the B. & O. R. R. was inspected on April 20, 1901, at which time the ventilation, which is produced by a 20 foot fan was excellent and would give the best results by judicious distribution, but some sections were found which were not benefitted to any great extent by the current for the reason that break-throughs were driven at too great a distance apart. Stoppings were found to be not very carefully constructed resulting in much leakage of air, again it was found the stoppings were not as promptly built as they might be. The roof, which is fairly safe, is carefully timbered in working faces. A considerable quantity of dust was found in one section of the mine and attention was called to this condition. Attention was also called to the fact that the doors were not self-closing.

GEO. W. FLEMING, Supt.

H. S. TOOTMAN, Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 22.

SOLOH OR NO. 9.

This mine is on the Monongahela River Division of the B. & O. R. R., 1-2 mile distant from the Ehlen Mine. The mine is a drift opening near the level of the railroad track. The coal is hauled up an incline about 400 feet, from drift mouth to tipple, endless rope being used for the purpose. The coal here is 8 feet thick. This mine was inspected on March 29, 1901, at which time the mine was well ventilated. The distribution of the current being very good. The head coal within this mine is maintained which makes a good roof. Some sections of this mine were found to be dangerously dusty unless thoroughly sprinkled. The inspector was informed by the Mine Boss that this was kept down. Unnecessarily heavy shots were found to be put off in this mine caused principally by the fact that the breaking down shots were placed too high in the seam which requires too great a quantity of powder to break down the cut. Mine Bosses' attention was called to this matter and the suggestion was made that the shots be placed lower in the seam. This mine plant is equipped with a 50 H. P. rope haulage engine; 150 H. P. dynamo engine; 1,100 K. W. generator; 1 20 H. P. shaking screen engine; 2 boilers 66 inches by 16 feet of 100 H. P. each.

On June 7th a visit was made to this mine to ascertain whether instructions given at the time of the previous inspection were being complied with and it was found that the dusty sections were being properly watered. Work was progressing on a heading being driven which would be used as a second outlet.

JOHN O. BROOKS, Supt.

THOMAS JARRETT, JR., Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 23.

BRIAR HILL MINE NO. 5.

This mine located at Gypsy, on the Monongahela River Division of the B. & O. R. R. is a drift mine and is connected underground with the workings of Briar Hill Mine No. 7, through which the production of the No. 5 Mine is being taken to the No. 7 tipple, pending the construction

of a very large tippie to the No. 5 mine. This mine is ventilated by means of a 12 foot exhaust fan. The quantity of air passing was sufficient, but the distribution could be considerably improved upon. Fire damp is generated in small quantities in one section of this mine. Condition of roof is good and the drainage of the working places was also good, but some water was found on the roadways. Preparations for the installation of a rope haulage plant were in progress. The above inspection was made on April 1, 1901, and on June 14th another visit was made to this mine at which time no gas was found within the mine. The condition of the mine was found to be good. The product of this mine will soon be taken to the tippie intended to handle its production. This is the largest tippie within this mining district.

JOHN O. BROOKS, Supt.

WM. JACKSON,

WM. BARRICK,

Mine Bosses.

BRIAR HILL COAL AND COKE COMPANY.

No. 24.

BRIAR HILL MINE NO. 6.

This mine which is a part of the large Gypsy plant is located on the Monongahela River Division of the B. & O. R. R. about 2 miles south of Gypsy. This mine was inspected on April 5, 1901, at which time it had but one opening but much diligence was being exerted to connect this mine with the mine known as the Gypsy Slope. This mine is equipped with a haulage plant, tippie and fan. The ventilation was found to be very good as was also the distribution of the current. The condition of the roof and drainage were all that could be desired. The haulways are kept clear and made of sufficient width to admit of travel with safety at all points. At this plant are located 2 72 inch by 18 feet boilers of 175 H. P. each, 1 150 H. P. rope haulage engine, 1 5 ft. by 12 ft. Brazil exhaust fan and 20 H. P. fan engine.

JOHN O. BROOKS, Supt.

CHARLES VICKERS, Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 25.

BRIAR HILL MINE NO. 7.

This opening is one of the four which will constitute the large Gypsy plant, located on the Monongahela River Division of the B. & O. R. R. in the Pittsburg coal seam which at this place is 8 feet thick. The coal from this drift is elevated to tippie height by an endless rope 4800 feet in length. The inside workings have been driven towards and connected with the workings of an opening 1-2 mile south known as the Briar Hill No. 5 thereby affording a second opening to both mines. On the date of this inspection April, 1, 1901, the mine was found to be in the following condition: ventilation and distribution of current, good; condition of roof showed that remarkable care was exercised in driving the headings, a good thickness of head coal being maintained, making safe haulage and travel ways. Careful propping of working places is also a feature here. The drainage is good and the mine remarkably free

from slate and dirt along the roadways; doors and stoppings are very substantially built and the overcast system is adopted wherever practicable. The outside equipment consists of boilers 72 inch by 18 feet 175 H. P. each, a 5 by 12 fan, 100 H. P. rope haulage engine and 1 1-4 haulage rope.

On June 8th this mine was visited and the conditions were found unchanged from the above.

JOHN O. BROOKS, Supt.

JAMES RODGERS,
WM. BARRICK, Mine oBsses.

BRIAR HILL COAL AND COKE COMPANY.

No. 26.

BRIAR HILL MINE NO. 8.

This mine has lately been purchased by the above company, it formerly being known as the Viropa Mine. It is located one mile north of Shinnston, on the Monongahela River Division of the B. & O. R. R. is a drift at about 1000 feet from and on a level with the tippie. It is the intention to use rope haulage from the mine to the tippie. A second opening as required by law had not been driven on the date of inspection, May 13, 1901, but the management notified the inspector when the attention was called to this requirement that the matter was under consideration and assured a compliance with the law within the near future. This mine is as yet a small plant, having little development. The ventilation and drainage were good; the condition of roof, distribution of air and the general safety of the mine, fair.

GEO. FLEMING, Supt.

A. H. MITCHELL, Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 27.

BRIAR HILL MINE NO. 10.

This mine located on the Monongahela River Division of the B. & O. R. R. at Glenn Falls and formerly known as the Glenn Falls Mine, was inspected on April 18, 1901, with the following results: the coal here is 9 feet thick, clean, a rider of soap-stone intervene between the seam and the main roof. Mining here is rendered very safe owing to the workmen being required to take this soap-stone down by means of wedges and levers throughout the entire mine. The main roof being solid, but few timbers are put in and those only as an extra precaution, they are sufficiently large and are well put up. Attention was called to the accumulation of slate on roadside or haulways, which decreases the safety of travel and work of drivers. Dirty and wet tracks were found in many places. The ventilation was sufficient in quantity but the distribution, could be very much improved upon. No second opening meeting with the requirements of section 6 of the Mining Law was found, but an abandoned furnace way was suggested to the management, which when cleaned and equipped with a short ladder will make a safe and covered traveling way. This mine is equipped with Ingersol-Sargeant air compressor for 5 mining machines, 100 H. P. boiler, 60 inch by 16 feet, a 10 ft. Brazil fan and 15 H. P. engine.

Again on June 15, this mine was inspected when it was found in very fair condition throughout with the exception of some mud and water in the roadway on main haulage, the working places, however, were dry. The second opening complained of at previous inspection was found to have been cleaned and prepared for travel as required by law.

H. H. WATSON, Supt.

W. B. SIMS, Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 28.

DURHAM MINE NO. 11.

This mine formerly owned and operated by the Alexander Coal Company, has recently passed to the ownership of the above Company and is located at Glenn Falls on the Monongahela River Division of the B. & O. R. R., 3 1-2 miles north of Clarksburg. This is a drift opening in the Pittsburg coal which is 9 feet thick. On April 8, 1901, this mine was inspected when it was found that the ventilation was good. The mine is ventilated by means of a furnace. Measurement of intake current was made at the drift mouth and that of the return current at the furnace which resulted in a showing of a leakage of 3360 cubic feet, due to defective construction of doors and stoppings. While the amount of current in circulation and reaching working faces was ample. This leakage shows the defect in this direction which a very small amount of care and pains would overcome and give the men in the working face the full benefit of the furnace's work. Some very ragged roof was found in heading and the Mine Bosses' attention was called to them. The rooms were very well propped there being plenty of good stout posts for the purpose. Drainage of working places in many instances was found bad. This mine is found with a second opening as required by law.

H. H. WATSON, Supt.

ROBERT CHARLTON, Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 29.

BRIAR HILL SLOPE.

This mine is a part of the Gypsy plant and is a slope driven at a point between Mines Nos. 5 and 6 for the main fan way for these mines. A 20 ft. fan is on the ground awaiting the completion of the arrangements now being made for its installation. A small fan is in temporary use to enable the connections to be made. On April 1, 1901, an inspection was made of this mine when the ventilation was found good, and the distribution of air was also good. The roof is only fair as many clay seams are encountered which have a bad effect. The drainage is very good with the exception of one or two places where water was found in the roadways. The general failure of poorly constructed doors was found here and complained of. On June 14th this mine was inspected and found to be in good condition with the exception of some mud and water on the roadways.

JOHN O. BROOKS, Supt.

BERT RUSSELL, Mine Boss.

HOWARD COAL AND COKE COMPANY.

No. 31.

HOWARD MINE.

This is a drift mine located four miles west of Clarksburg on the Parkersburg branch of the B. & O. R. R., operating the Pittsburg coal, which at this point proves to be 6 feet in thickness. The product of the mine is lowered by gravity on an incline about 200 feet in length, it having a dip of 20 degrees. The larger part of the production of this mine is consumed by the locomotives on the B. & O. R. R. This mine was inspected on April 5, 1901, when it was found that the ventilation was created by a furnace which was entirely inadequate to the requirements. The distribution of the current was exceedingly poor and as a result the working places were very smoky. A very bad top overlies the seam and it was noticed that on the main haulway which is upwards of 4,000 feet in length cross timbers, which are quite small and closely lagged, are carrying immense quantities of this fallen soap-stone, in some places 4 or 5 feet in thickness and showing signs of their heavy burden. The Superintendent's attention was called to this and he was instructed to have the slate taken down and timbers relieved. The headings and haulways were found to be in almost as dangerous condition, especially where head coal and soap-stone had broken and in a very ragged shape without being timbered or in any way dealt with to offer protection to drivers or any one whose duties required him to travel such headings. The drainage in a number of places could be termed anything but good, although an effort was made to bail the water the result was unsatisfactory as much water reached the working places. It is expected, however, that much of this trouble will be remedied by a heading which is being driven to the crop, as soon as the dip breaks through the crop line. Instructions were given to use every effort to have this heading speedily driven. The propping in the rooms while fair could be much improved upon.

JOHN TEMPLE, Supt.

JOHN GLANCY, Mine Boss.

DESPARD GAS COAL COMPANY.

No. 32.

DESPARD MINE NO. 2.

This mine is situated one mile east of Clarksburg on the B. & O. R. R. On April 16, 1901, this mine was inspected. The mine is ventilated by natural means and practically no air was found in circulation in the mine. Several holes are broken in the outcrop and the ventilating current is shifting. The air moves for a few moments and then it becomes still, in no part of the mine was there sufficient current found to enable a measurement of the quantity passing to be taken. It is also found next to impossible to make any suggestions that would improve the mine as all of the work done here is pillar robbing and all connections have been destroyed by the method of robbing, which they have employed. Only a few men are engaged in the mine. The coal is very easily won, practically no powder being used and as a result, little, if any, smoke is found within the mine, and the workings are not extensive, it is consid-

ered best under the circumstances to allow the mine to proceed under the conditions that exist. The top here is excellent and the drainage very good.

MORDICAL LEWIS, Supt.

ANTHONY McANDREW,

WEST FORK MINING COMPANY.

No. 33.

WEST FORK MINE.

This mine is a drift opening at Byron station (formerly Mt. Clare) on the W. Va. & P. Division of B. & O. R. R., seven miles south of Clarksburg. On April 24, 1901, an inspection was made of this mine but it was only partial for the reason of a very small part of the mine being accessible on account of water caused by incessant rains. Broken surface through the pillar robbing together with little bad management in regard to driving headings near the crop with comparatively no cover over them, the surface being broken through filled with water and having no strata between it and the coal, which was taken out having no support, save a very bad attempt at cross timbering, gave way and filled the ditches. The ventilation, condition of roof and distribution of air, fair; the drainage of working place, bad; general safety, fair; condition of ropes and all machinery, good. For reason of so little of the mine workings being accessible at this visit, another inspection is meditated in the near future, when it is hoped the trouble will be overcome to such an extent as to render inspection possible.

F. H. TIBBET, Supt.

A. D. MITCHELL, Mine Boss

FAIRMONT AND BALTIMORE COAL AND COKE COMPANY.

No. 34.

FAIRMORE MINE.

This mine is located at Adamston on the Parkersburg branch of the B. & O. R. R., two miles west of Clarksburg. The coal from the mine, which is a drift opening, is lowered by gravity, down an incline 250 feet long, having a dip of about 20 degrees. On March 21, 1901, this mine was inspected. The roof is only fair, has a draw slate intervening between the seam and the main roof, which when exposed to the air disintegrates and becomes dangerous. A head coal of 6 to 8 inches is maintained, however, and very carefully propped there being an abundance of good timber and the rule of timbering strictly enforced. A 12 ft. Cole fan, which works as an exhaust, gives excellent results. The brattices are kept up, making the distribution of air all that could be desired. A feature of this mine, for while not dusty, there is practically no water to be found in any part of it. The headings are driven of sufficient width to allow travel at any part without being dangerous. Tracks are kept well filled and roadsides absolutely free from slate, dirt and timber. There are three intakes which also serve as good clean openings for travel, as well as, forming three separate splits for air current. Installed at the plant are 1 80 H. P. boiler; a 20 H. P. fan engine; 1 30 H. P. engine for knocker screen, which is all the machinery used. The coal mined is the Pittsburg seam, which is 7 1-2 feet thick.

ED. MUIR, Supt.

T. J. WESTMORELAND, Mine Boss.

HUTCHINSON COAL COMPANY.

No. 35.

LYNCH MINE.

This is a drift mine, located four miles south of Clarksburg on the W. Va. & P. Division of the B. & O. R. R. The ventilation is created by furnace, which gives very good results. The management has in contemplation the installation of a fan, for this purpose a pair of headings is being driven through the hill to the outcrop, one of which will be used for the fan-way and the other for a second opening. This mine was inspected on April 18, 1901. The roof of this mine is superior to any in the region operating the Pittsburg coal, it being a mixture of gray slate and sand-stone. Few props are really needed in this mine but they are furnished and rooms are watered and propped by the management as an extra precaution. The ventilation, condition of roof, distribution of air, general safety, drainage of working places and condition of all machinery are good. The coal from the mine is lowered to the tippie by means of an incline 200 feet long and has a dip of 35 degrees.

S. A. LEWIS, Supt.

J. C. WAGNER, Mine Boss.

HUTCHINSON COAL COMPANY.

No. 36.

DOLAN MINE.

This is a drift mine on the B. & O. R. R. seven miles west of Clarksburg and about one mile east of Wolfsummit. On March 22, 1901, inspection was made of this mine. It is ventilated by means of a furnace, which gives good ventilation for all of the working faces. The roof is carefully propped and the headings are driven of sufficient width to render travel safe. The roadsides are kept reasonably free from slate, but in one or two places mud and water were found on the roads. This could be prevented by a little attention. The coal at this place is 7 feet thick and Pittsburg seam. At present the coal is hauled by mules to the tippie, and the grade from the mouth of the mine to the tippie being heavy, renders the production slow, but the owners have in view the installation of rope haulage system.

S. A. LEWIS, Supt.

WM. GOODNITE, Mine Boss.

HUTCHINSON COAL COMPANY.

No. 37.

EHLEN MINE.

This mine operates in the Pittsburg coal, 8 feet thick, 1-2 mile south of Shinnston, on the Monongahela River Division of the B. & O. R. R., and is ventilated by a furnace. This is a new mine and is equipped with a modern tippie having an improved shoot with screens of the shaker type and all appliances that tend to facilitate the handling and separation of a large quantity of coal. The coal is hauled to tippie height, at present, by a single rope haulage, a 40 H. P. engine being the motor power, but they are contemplating replacing this with an endless rope and motor for machinery, as soon as the inside workings are sufficiently developed.

March 29, 1901, an inspection was made of this mine. The ventilation here is good and arrangements are being made to improve it in the near future by the construction of a new and large fan and the adoption of the over-cast system. The roof, while only fair, is supported by 8 to 10 inches of head coal making an excellent top. The headings are driven sufficiently wide to render travel safe at any point. The electrical power wires used at this mine are confined entirely to the air course, thus reducing the danger from this source to a minimum. The roads are well filled. The drainage, good, and the cleanest second opening as yet seen. There is at this mine a battery of boilers; one boiler 60 inches by 12 feet, 50 H. P.; engine to drive shaker screen 18 by 12, 15 H. P.

N. SUMMERVILLE, Supt.

N. SUMMERVILLE, Mine Boss.

HIGHLAND COAL AND COKE COMPANY.

No. 38.

OCEAN MINE NO. 5.

This mine formerly operated by the Cleveland and Fairmont Coal and Coke Company is located at the eastern end of the B. & O R. R. tunnel between Clarksburg and Bridgeport. This mine was the scene of a gas explosion, in 1891, whereby four men lost their lives. The immediate spot where the explosion occurred was visited on the date of inspection, April 10, 1901, and found to be abandoned. The heading has been cleaned of falls within the last year and with that exception no work has been done since the disaster. The mine is ventilated by a 12 ft. Cole fan driven by a 20 H. P. engine. It was noticed that there was no current in circulation and as a result the place was quite warm but not the slightest trace of fire damp could be found. This mine; generally is in a splendid condition in regard to ventilation, distribution of air, drainage, condition of roof and propping with the exception of the distance between cross-cuts, and doors that were not self-closing. It is safe to state that the law here meets with a strict compliance, that is very creditable to the management. The mine is equipped with one of the finest and most modern tipples in the field, together with all new and improved machinery for the mining and handling of coal. Two boilers, 60 inch by 18 feet, 100 H. P. each; one haulage engine of 80 H. P.; one Ingersol-Sargeant air compressor and the 20 H. P. fan engine mentioned above constitute the mechanical appliances of this mine.

This mine was again inspected on June 1st when it was found to be in equally as good condition as when inspection during April was made.

E. P. GOEDECKE, Supt.

URIAH BLAKESMITH, Mine Boss.

HIGHLAND COAL AND COKE COMPANY.

No. 39.

COLUMBIA MINE NO. 4.

This is a drift mine operating the Pittsburg coal 9 feet thick, three miles east of Clarksburg on the line of the B. & O. R. R. This mine, recently operated by the Columbia Coal and Coke Company but now by the above Company was inspected April 2, 1901. The coal from the crop into the interior of the property dips 3 1-2 feet in the hundred. The

ventilation is produced by a 12 ft. Brazil fan. The air, from a point of generation of current, was good, but its distribution, very ordinary, showing that no particular effort was made to carry it to the working places. This neglect was very apparent in the face of rooms. The condition of the roof was very fair, head coal being maintained except in places where the miners had bored their shot holes too high and had broken through in the overlying slate. The general safety of the mine was good; drainage only fair, mud and water being found in places; the ropes and all machinery were all new and in splendid condition. The doors within use at the mine do not come up to the requirement of the law. At this mine are installed one 10 machine Ingersol-Sargeant air compressor; one 75 H. P. haulage engine; boilers, 72 inches by 18 feet, 72 H. P. each; one 20 H. P. fan engine propelled by compressed air.

On June 1, 1901, this mine was again inspected and was found greatly improved since the previous inspection and the mine can be considered in good condition with the exception of drainage in some sections. Attention was called to this failure and the inspector was assured that it would be remedied at once.

J. A. SOMERVILLE, Supt.

OLIVER BERNARD, Mine Boss.

RIVERDALE MINING COMPANY.

No. 40.

RIVERDALE MINE.

This mine is located on the M. R. Division of the B. & O. Railroad, near Shinnston. This is a drift mine operating the Pittsburg bed of coal. On March 29th, 1901, this mine was inspected, but on that date the mine was not working, and the ventilation which is produced by means of a furnace was not in working condition by reason of the furnace having no fire. It may readily be believed that the ventilation is good, judging from the arrangements on the inside of the mine. The doors and brattices are carefully constructed and daubed. It was also noticed that the current was kept well up to the working faces, as all of the cross-cuts were properly closed. Section 6 of the mine laws relative to a second opening is here violated however, and attention was called to this violation, and instructions were given to drive the first left cross-heading out with all possible diligence for temporary use until a proper second opening could be made. The working places are well drained and timbered. The mechanical arrangements for handling the coal at this plant are very satisfactory.

C. F. EVANS, Supt.

WILLIAM REID, Mine Boss.

MEADOW BROOK COAL & COKE COMPANY.

No. 41.

MEADOW BROOK MINE.

This is a drift mine working the Pittsburg coal, located on Simpson Creek, about one-half mile from Meadow Brook station, on the M. R. Division of the B. & O. Railroad. The coal is at tipple height and is 9 feet thick, having a fair roof. No head coal is left in the mine, the coal being worked from slate to slate. It would appear that the general safety of

both drivers and other workment would be much improved if head coal was maintained in the main haul and traveling ways, as the nature of the overlying slate is such that it disintegrates and crumbles when exposed to the air, thereby rendering travel beneath it dangerous. A disconnection of the same by a depression of the overlying strata is frequently met with here, causing much inconvenience and expense. On April 6th, 1901, an inspection was made of this mine, when the ventilation and distribution of air current were found to be excellent, the drainage good, and working places well and carefully propped. No second opening was found here however, but was promised immediate attention. The ventilation of the mine is produced by a 12 ft. Brazil fan acting on the Plenum System. The mine is equipped with 72 inch by 16 feet boilers of 125 H. P. each; a 163 H. P. dynamo engine; one generator of 100 K. W.; and one 40 H. P. conveyor engine. The mine is also equipped with a large and modern tippie that will be able to handle a very large tonnage of coal as soon as inside developments will permit.

C. E. HUTCHINSON, Supt.

P. B. ROBINSON, Mine Boss.

O'NEIL COAL AND COKE COMPANY.

No. 42.

O'NEIL MINE NO. 1.

This mine is a drift working the Pittsburg coal, and located on a branch line which leaves the Parkersburg Branch of the B. & O. Railroad, five miles west of Clarksburg. The coal is at tippie height, and is about 5 feet 8 inches thick, overlaid with a very bad soap-stone top. A head coal is being maintained, making the workings comparatively safe. On April 4th, 1901, this mine was inspected, but owing to a scarcity of railroad cars the mine was idle, and as a result no measurement could be taken of the air current, as the fan was not running. But, judging from the arrangement and general construction of doors, stoppings, etc., there could be no doubt of the results being good. This colliery has complied with the law in the establishment of a splendid second opening. The coal is mined with Harrison punching machines, driven by air compressed by a Norwalk compressor. The ventilating fan is 12 feet in diameter, and is known as a Brazil fan. Boilers 72 inch by 18 feet, 125 H. P. each, furnish the power.

JOHN S. O'NEIL, Supt.

JOHN DAILEY, Mine Boss.

O'NEIL COAL & COKE COMPANY.

No. 43.

O'NEIL MINE NO. 2.

This mine is one-half mile south of the O'Neil Mine No. 1. It is a drift opening at tippie height operating the Pittsburg seam, which at this mine is 6 feet thick.

On April 4th, 1901, this mine was inspected, and the ventilation, which is produced by a fan, was found to be good. The intake measurement was taken at the innermost section of the workings, and the outlet current 100 feet from the fan, showing a loss of about 3,000 cubic feet due to leakage

in doors and brattices, which could be easily remedied, but as the quantity of air was ample for all purposes and very judiciously distributed to all working faces no mention was made to the foreman of this leakage. The drainage could be considerably improved upon, as considerable water was found in a number of the working places. A very bad top was found in the mine, it being soapstone and very wet and soft. Head coal is being maintained and very carefully propped and cross-timbered, but despite all this care many rooms were found which had fallen very high. No second opening was found here, but a cross-heading being driven to the crop was ordered driven with all diligence. Doors were noticed to be not self-closing, and a complaint was made of this condition. The boilers, fan, air compressor and other equipments are identical with those of Mine No. 1.

JOHN S. O'NEIL, Supt.

J. A. JENKINS, Mine Boss.

TWO LICK RUN COAL COMPANY.

No. 44.

TWO LICK MINE.

This is a new mine operating the Pittsburg coal, five miles south of Clarksburg, on the W. Va. & Pittsburg Division of the B. & O. Railroad.

On April 19th, 1901, this mine was inspected. The work being done consisted of the driving of a main heading and air course, which were in a distance of 400 feet. There were but 10 men employed at the time. The ventilation, which is created by a furnace, was good. Preparations were being made to substitute a fan in the near future. The condition of the roof was only fair, as some places were noticed where it was broken and not properly secured by timbers. The main headings were going to the dip, and making some water in the working faces. Attention was called to the necessity of keeping this water bailed. The production of the mine is hauled by a motor a distance of 4,200 feet from the tippie. The plant is equipped with boilers of 150 H. P. each; a dynamo engine of 125 H. P.; and a generator of 100 K. W.

CHARLES SPRAT, Supt.

JAMES HARDY, Mine Boss.

The following is a list of mines which are in process of development:

No. 45. Cook Coal and Coke Company.

No. 47. Purseglove Coal Company.

No. 49. Perry Coal and Coke Company.

No. 50. Erie Coal and Coke Company.

INTERSTATE COAL CO.

No. 46.

INTERSTATE MINE NO. 3.

This is a new mine located 8 miles south of Clarksburg, on the W. Va. & P. Division of the B. & O. R. R. Three openings have been made, one for the purpose of ventilation and two for haulage. At the time of inspection, June 20, 1901, very little air was found in the mine. Every effort, however, was being made in the direction of air connections and the erection of a fan. The coal is the Pittsburg Seam, which at this place is 8 ft. thick, and is mined by Ingersoll-Sergeant punching machines. The prod-

uct is hauled by mules over a tram-way, 800 feet in length to a tippie, which is modern and up to date in its appointments. Capacity of the tippie is rated at 2,000 tons per day. The plant is equipped with Ingersoll-Sergeant air compressor and punching machines, together with the necessary boiler power.

SAMUEL KINSEY, Supt. and Mine Boss.

DIXIE COAL CO.

No. 48.

DIXIE MINE.

On June 21, 1901, this mine was inspected. This is a new mine, and on date of inspection a very slight current of air, caused by natural means was in circulation and as the furnace was in course of construction and all due diligence being taken in the work the measurement of the current was omitted. Judging from the construction and location of the furnace it cannot fail to give very good results. The coal which is being mined is the Pittsburg and is about 7 ft. under a head coal of 12 inches, which is left for the protection of the roof, owing to the shallowness of the overlying cover. The product of the mine is lowered by gravity on an incline, 300 ft. in length, to the tippie, which has a capacity of 800 tons per day.

J. C. HAMILTON, Supt.

RUSSELL LARIMER, Mine Boss.

MARION COUNTY.

WEST FAIRMONT COAL AND COKE COMPANY.

No. 51.

WEST FAIRMONT SHAFT.

This mine is located on the B. & O. Railroad at Barnesville.

On May 27th, 1901, an inspection was made of this mine. The ventilation was found to be good; the distribution of air was good; the drainage fair, there being but one or two places going to the dip where water was found, but preparations were being made to remove it. The roof throughout this mine was found to be well cared for by posts and timbers. No fire damp was encountered on date of inspection, although most every working place was thoroughly searched for it. One feature in this mine is the great attention given to watering of machine dust in those sections of the mine where machines are in use and where dust exists. Very careful attention is also given here to the oil in use.

J. J. BRENNAN, Supt.

WILLIAM GRAUTZ, Mine Boss.

S. R. FETTY,

C. E. SIDWELL,

T. W. HAUL,

SAM WOOD, Fire Bosses.

WEST FAIRMONT COAL AND COKE COMPANY.

No. 52.

NEW ENGLAND MINE.

This is a drift mine operating the Pittsburg coal, located at Watson, on the M. R. Division of the B. & O. Railroad, and is one of the largest coal producers in the Fairmont mining district. About fifty per cent. of its

production is mined by machines of the Jeffrey type. The product of the mine is hauled by an endless rope 19,000 feet in length and 1 1-4 inches in diameter.

On May 23rd, 1901, this mine was inspected. The ventilation, produced by a 20 ft. fan of the Helmick pattern, gives good results, the current from it being judiciously and economically distributed. Points of excellence observed in this mine were—Cleanliness, dry haul-ways, wide headings rendering safety in travel and working, good stoppings made of brick and mortar, the adoption of the overcast system wherever practicable. No dust was encountered within the mine. The working places were well propped, and particular attention given to the oil used for illumination.

C. F. ICE, Supt.

J. C. THOMPSON, Mine Boss.

BENNY HOLSWORTH,

G. N. HALE, Fire Bosses.

GASTON GAS COAL COMPANY.

No. 53.

GASTON MINE.

This mine is located on the West Fork River, opposite to the New England mine at Watson. This is a slope opening on a four per cent. dip, the main heading being the slope 4,300 feet long.

On May 22nd, 1901, this mine was inspected. The ventilation, which is produced by a Thayer fan, is good, and the distribution of the air very fair. One objectionable feature is the very general use of canvass brattice, which in some instances is very ragged. The generation of gas, while not general, is quite strong in places, but is watched very carefully, air being kept close to the working faces in every instance. The roof can only be considered fair, as a number of broken places were seen that were not safe, some being caused by faults of deflection of the seam. A single rope haulage connects the plant with the tippie. Preparations were being made for a new tippie and an endless rope and more powerful hoisting engines in the near future.

GEORGE WATSON, Supt.

C. H. TARLETON, Mine Boss.

JOHN E. TRICKETT,

J. J. GATIN, Fire Bosses.

MONTANA COAL AND COKE COMPANY.

Nos. 54—55.

MONTANA MINE.

This is a drift mine located on the Fairmont & Morgantown Division on the B. & O. Railroad at Montana.

No inspection was made of this mine by the incumbent inspector, for reason of the time allotted not being sufficient to reach this mine.

C. E. GASKILL, Supt.

WM. GASKILL, Mine Boss.

MASON COAL AND COKE COMPANY.

No. 56.

LUTHER MINE.

For reasons assigned above, no inspection was made of this mine.

FRANK PARSON, Supt.

FRANK PARSON, Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 57.

MURRAY, OR BRIAR HILL, MINE NO. 2.

This is a drift mine at tipple height, located at Murray station, nine miles north of Fairmont, on the Fairmont and Morgantown Division of the B. & O. Railroad. The coal mined is the Pittsburg seam. The product of the mine is trammed to a tipple by means of an endless rope.

On June 11th, 1901, this mine was inspected, when it was found in a scrupulously clean and safe condition, with the single exception of a small accumulation of dust in one section. Attention was called to the necessity of remedying this fault, and assurance was given that it would be dealt with at once. A feature of this mine is the heavy grades in some sections, which require the use of planks along the side of the rail in order to control speed of the mine cars. The mine is ventilated by a fan, which gives good results, the air being well distributed. The general safety, drainage of working places, condition of ropes and of machinery were good.

J. H. BAINBRIDGE, Supt.

E. A. FREEMAN, Mine Boss.

VIRGINIA AND PITTSBURG COAL AND COKE COMPANY.

No. 58.

KING MINE.

This mine is located on the Tygart's Valley River, four miles east of Fairmont. The product of this mine is conveyed across the river in buckets carried on a rope tramway. Preparations are being made to substitute a steel bridge for this rope tramway, when the mine cars will be taken from the mine to the tipple.

No inspection was made of this mine, for reason of the incumbent inspector having insufficient time to visit all the mines in the district.

R. M. HITE, Supt.

WM. J. KEEFE, Mine Boss.

MONONGAH COAL AND COKE COMPANY.

No. 59.

MONONGAH MINE NO. 2.

This is a slope mine, located at Monongah, operating the Pittsburg coal.

On May 10th, 1901, an inspection was made of this mine. The mine was found to be in good condition generally. Some water was found on the road-ways in a section that had been started for the purpose of robbing pillars. Preparations were being made to drain this section of the mine. Ragged roof to the extent generally found in places where pillars are being taken out was also found, but was propped as carefully as possible. The haulage inside of the mine is made by means of electric motors as far as the foot of the slope, where a rope takes the product to the tipple. The ventilation, which is produced by an exhaust fan, was good, two splits being taken from the main intake current, each one ventilating a separate section. The general safety, condition of ropes and of machinery were good.

A. J. RUCKMAN, Supt.

THOMAS KILLEENE, Mine Boss.

MONONGAH COAL AND COKE COMPANY.

No. 60.

MONONGAH MINE NO. 3.

This is a drift mine operating the Pittsburg coal, about one mile south of the No. 2 opening.

On May 8th and 9th, 1901, this mine was visited and a thorough examination made, when it was found to be in the following condition:

The ventilation, which is produced by an exhaust, was sufficient for all purposes. The roof throughout was well and carefully propped. The distribution of air was good in all sections with but one exception, which, while not bad, could be improved upon. Doors and brattices, with one or two exceptions, which were not self-closing, bespoke painstaking in their construction. The headings are driven of sufficient width as to render travel safe at almost any point. The drainage was good, and the mine generally in a safe condition. Electric motors are in use to convey the product to the drift mouth, where a single rope haulage conveys it to the tippie. The use of a very inferior grade of illuminating oil was tolerated here. As every precaution was being had for a strict compliance with the oil law, no mention was made to the management of this defect.

A. J. RUCKMAN, Supt.

DAVID VICTOR, Mine Boss.

PAT LAUGHERY, Asst. Mine Boss.

MONONGAH COAL AND COKE COMPANY.

No. 61.

MONONGAH MINE NO. 5.

On May 10th, 1901, this mine was inspected, when it was found that a very good report could be made as to ventilation, drainage and general safety. The product of this mine is hauled by a motor through the No. 2 mine to the rope haulage, and the mine may in one sense be considered the same as mine No. 2, but having a separate mine foreman and a general organization of its own.

A. J. RUCKMAN, Supt.

BENJ. MORGAN, Mine Boss.

MONONGAH COAL AND COKE COMPANY.

No. 62.

MONONGAH MINE NO. 6.

This is a slope mine on the west side of West Fork River at Monongah. The slope is driven through the strata to the seam, which is reached at a distance of 600 feet from the mouth of the slope on a 9 degree pitch. The coal is hoisted by a single rope to the tippie, which is on the opposite side of the river. This is a model mine, showing evidence of careful management from the slope mouth to the fan at the bottom of the air shaft. The slope is timbered with the best of material, and refuge holes, as required by law are the exact distances, and drainage practically perfect. The working faces are carefully propped. The haul-ways are roomy and free from accumulations of slate and timber. The ventilation is produced by a 11 ft. Capell fan driven by an 80 H. P. engine, and is all that could be desired, the current being judiciously distributed. The over-cast

system is exclusively in use in this mine. Gas is given off in considerable quantities throughout this mine, but it is carefully handled and not permitted to accumulate in any place. Naked lights were in use on the date of this inspection (May 7th and 8th, 1901), but safety lamps had arrived, which the management had decided to put in use as an extra precaution until a slope to be made as an additional intake and second opening had been completed. This plant is equipped with a haulage engine, four 100 H. P. boilers, and elevators and conveyors for handling the coal at the tipple.

A. E. Reppert is the general inside foreman of this and other Monongah mines.

Again on June 18th, 1901, this mine was inspected, when it was found to be in the same condition as previously reported, with the exception that a connection to the slope was nearing completion and all diligence being used in that direction. The safety lamps had been adopted throughout the mine, and special rules as required by law were posted outside the mine.

A. J. RUCKMAN, Supt.

JAMES ABERCROMBIA, Mine Boss.

DAVID GRACE, Fire Boss.

HIGHLAND COAL AND COKE COMPANY.

No. 64.

ANDERSON MINE.

This mine was formerly the property of the Clarke Coal & Coke Company, and is located on the M. R. Division of the B. & O. Railroad, one mile north of Highland station.

On May 29th, 1901, an inspection was made of this mine, when it was found to be in fair condition, but a violation of Section 6 of the mine law was noted, inasmuch as the second opening did not meet with the requirements. The management of the mine was notified of this fact, and a promise was made for the driving of a heading to the crop line for this purpose. Some dust was found within the mine, and the attention of the management was called to it. However, the accumulation was small, and in one section only. The mine is ventilated by a 12 ft. Brazil fan acting as an exhaust. Timber is furnished abundantly, and the working faces are well propped. Special attention is given to the oil used in this mine.

T. S. HAYMOND, Supt.

GEORGE COEBURN,

JOHN PRUNTY, Mine Bosses.

HIGHLAND COAL AND COKE COMPANY.

No. 65.

CHIEFTON MINE.

This mine was formerly the property of the J. A. Clarke Coal Company.

This is a drift mine at Chiefton, on the M. R. Division of the B. & O. Railroad. The coal at this point is at a level, somewhat lower than the railroad tract, which necessitates a rope haulage 1,200 feet in length. For the purpose of this haulage an engine of 75 H. P. is in use, as is also a 7-8 inch wire rope. The coal is mined by use of Jeffrey machines, the power for which is generated by a 100 K. W. generator driven by a 150 H. P. en-

gine. The inside workings of this mine were inspected on April 29th, 1901, when the ventilation was found to be good throughout, with the exception of one section, where the opening just driven to the outcrop somewhat baffled the effect of the fan. This, however, was to be remedied at once, and could only be considered as a temporary trouble. The condition of the roof was only fair, several ragged places being noticed in the haul-ways. The working places were generally well propped. Drainage was very good. The quality of oil used here was found to be below the average. The doors within this mine did not meet with the requirements of the law.

JAMES STIRRAT, Supt.

C. H. BROOKS, Mine Boss.

HIGHLAND COAL AND COKE COMPANY.

No. 66.

HIGHLAND MINE.

This is a drift mine operating the Pittsburg coal at tipple height, and located at Highland, on the M. T. Division of the B. & O. Railroad.

An inspection was made of this mine on May 28th, 1901, when it was found that the ventilation and distribution of air current were good. The roof, while good in all working places, was found in some sections to be in a very ragged and dangerous condition. The accumulation of dust to a dangerous extent was found in three sections, and attention called at the time and by a mail communication the day following, directing the management to thoroughly water down this dust at once and that it be kept in that condition, and a request was also made to take down all loose slate and to timber and render safe the places mentioned before allowing anyone to enter those parts.

Again on June 6th, 1901, this mine was visited for the purpose of ascertaining if the recommendations previously made had been complied with, when it was found that the bad places in the roof were being well and securely timbered and all dust was being loaded in cars and taken outside, rendering the mine in a safe and clean condition. Special rules were found posted at this mine as required by law.

T. S. HAYMOND, Supt.

B. E. SATTERFIELD, Mine Boss.

PENNOIS COAL AND COKE COMPANY.

No. 67.

PENNOIS MINE.

This is a drift mine operating the Pittsburg coal below tipple height, two miles south of Monongah, on the M. R. Division of the B. & O. Railroad. The product of the mine is conveyed over an incline having an 8 per cent. grade, a distance of 327 ft. from the tipple. For this purpose a 60 H. P. engine and 2 3-4 inch wire rope are used. This plant is equipped with a very neat steel tipple of modern type. The mine had a capacity of 500 tons per day. The ventilation of the mine is very fair, but could be readily improved upon by closing up much leakage at fan, which takes a great deal of air from holes in the casing and lining of the air course. The fan used is 10 ft. in diameter, and is known as the Cole fan, driven by a 30 H. P. engine. Date of inspection June 19th, 1901.

JAMES CARTER, Supt.

L. E. PARKER, Mine Boss.

WORTHINGTON COAL AND COKE COMPANY.

No. 68.

HUTCHINSON MINE.

This is a slope mine located at Hutchinson, on the M. R. Division of the B. & O. Railroad.

On June 15th, 1901, an inspection was made of this mine, when the ventilation was found particularly good as regards the quantity, but as to the distribution it could be termed only fair, due to the fact that in the first place the arrangement of the overcasts were in every instance very much contracted, and no regulators had been placed in the return air course inside of the splits, and as this distance was much the shorter the very large bulk of the current traveled into the main heading and to the fan without benefitting the cross headings to the extent necessary. Much mud and water were found on the haulways.

THOS. ARNET, Supt.

THOS. POLLOCK, Mine Boss.

PALATINE COAL COMPANY.

No. 69.

O'DONNELL MINE.

This is a drift mine located on the B. & O. Railroad at the junction of the Tygarts Valley and West Fork Rivers, the mine being about 300 feet above the level of the railroad track. This mine recently took fire, and at this writing is still burning, and as a consequence was not being operated.

M. D. ORR, Supt.

J. C. McKINNEY, Mine Boss.

GEORGE'S CREEK COAL & IRON COMPANY.

No. 70.

CHATHAM MINE NO. 1.

This is a shaft mine 353 feet deep operating the Pittsburg coal, and located at Farmington, on the B. & O. Railroad. The coal in this mine is about 10 feet thick, and of elegant quality.

On May 11th, 1901, this mine was inspected, when the condition of the mine was not as a whole satisfactory, for the reason that while a very strong current of air was in circulation it was not distributed thoroughly in working places. The air merely came down the downcast, or air shaft, and returned up the upcast, or hoisting shaft. The coal is mined by compressed air chain machines of the Jeffrey pattern. This has a tendency to ventilate the working faces, but their utility in this capacity is of a questionable character, both from point of health and reliability. The great trouble within this mine is the unreasonable thickness of pillars (they being 125 ft.) rendering ready and safe ventilation impossible. The mine foreman's attention was called to this defect. The superintendent being absent, could not be consulted at that time. Safety lamps of the Wolfe pattern were in exclusive use. On May 15th, 1901, an explosion occurred within the mine, the details of which are discussed in a separate chapter in this report.

Four separate inspections were made of this mine during the month of June. Great trouble has been experienced in an endeavor to educate

the inside management to the necessity of keeping the brattices to the face of the working places. Also as to the worthlessness of canvass brattice. To insure future safety for workmen it was found necessary to request the removal of the inside foreman, which was readily complied with. A general change in the system of work is now under way, but it will require sometime to complete it, as the old system was so far advanced as to render a change a rather long undertaking.

R. L. SOMERVILLE, Supt.

JOHN HOLLAND, Mine Boss.

EVAN GRIFFITH, Fire Boss.

MARSHALL COUNTY.

CONDITION OF MINES REPORTED BY JERRY MEADE.

BOGGS RUN MINING & MANUFACTURING COMPANY.

No. 71.

BOGGS RUN MINE.

This is a drift mine located at tipple height above the B. & O. Railroad, at 48th street, Wheeling.

On February 2nd, 1901, an inspection was made of this mine, when the roadways were found generally good throughout the mine; the mine doors in very fair condition; the ventilation and distribution of air, the condition of ropes and all machinery and of refuge holes good. The coal is hauled out of this mine by a rope a distance of one mile. Break-throughs between the rooms are kept up fairly well, and no complaints were made by anyone.

Again on June 2nd, 1901, this mine was visited, but owing to its not being in operation on that date no inspection was made. At times this mine in the advanced workings generates explosive gas.

PHILIP KUNZ, Supt.

EUGENE MILLER, Mine Boss.

WHEELING STEEL & IRON COMPANY.

No. 72.

BENWOOD MINE.

On June 26th, 1901, an inspection was made of this mine, when it was found that only three men were engaged in doing general repair work within the mine and looking after the removal of the water which had been standing in the mine for a number of years. The main entry had been timbered considerably and the roadways drained. This mine was again visited on June 18th, 1901, when it was found that considerably difficulty was encountered in an attempt to remove the water from the mine, owing to recent heavy rains. The air was not as good as it should have been, which was due to the cave-in of the air course, but when the water is removed from the mine and about 400 feet of entry driven a shaft will be sunk, which will be used as a second outlet and means of ventilation. The roadways were found to be good, and the mine doors in good condition. At this inspection the only second opening was through the furnace entry.

PATRICK BRANNON, Supt.

PETER O'MALLEY, Mine Boss.

GLENDALE COAL COMPANY.

No. 73.

GLENDALE SHAFT.

On February 1st, 1901, this mine was inspected, when the ventilation of the mine, condition of the roof, distribution of air, condition of ropes and of machinery were good. The general safety, drainage of working places, refuge holes, etc., were fair. The break-throughs between rooms were being kept up fairly well. The safety gauges on the tippie were out of repair and not in use. There were also two gauges needed at the surface landing. The hoods on the carriage were out of shape, and needed repairing quite badly. No tract of gas could be found in any part of this mine that is being worked.

Again on June 14th, 1901, this mine was inspected, when it was found that the electric motor in the mine had no headlight, and a request was made that one be put on at once, which Mr. Blake, the general manager, promised to have done, as the lamp had arrived and will be put on at once. The safety gates at the head of the shaft were broken, and the management was requested that they be repaired and put in use at once. Also a request was made that a stretcher and blankets be provided for use at the mine in compliance with the law.

T. E. WALLACE, Supt.

J. W. SMITH, Mine Boss.

MOUNDSVILLE COAL COMPANY.

No. 74.

MOUNDSVILLE SHAFT.

On January 31st, 1901, this mine was inspected. A small amount of gas was found at the face of the 9th right entry, which had not been worked for sometime, and is about 60 feet inside of the last break-through. The air course had some large falls of stone in it, which were requested to be removed. The exhaust steam from the pump at the foot of the air shaft escapes into the intake air course, and it was requested that the pipe be made steam tight. The space at this point is quite small, and should be made larger for a good inlet. There are no safety gates at the surface landing, and one of the cage sides was found broken on one of the cages. This the Superintendent, Mr. Berry, has promised to have repaired as soon as possible. The second opening is very wet and muddy.

On June 15th, 1901, another inspection was made of this mine on which date it was found idle, but a few miners were found at work, and after making a careful examination the mine was found in good condition. A stretcher and blankets had not been secured, and a request was made that they be procured at once, and assurance was given that this request would be complied with.

J. W. BERRY, Supt.

E. C. PICKET, Mine Boss.

*MINERAL COUNTY.**CONDITION OF MINES REPORTED BY JERRY MEADE.**DAVIS COAL AND COKE COMPANY.*

No. 75.

HAMPSHIRE SIX FOOT MINE.

This mine is located on the line of the W. Va. C. & P. R. R. This is a drift opening.

On February 13th, 1901, this mine was visited and an inspection made. On the day of inspection, however, the mine was idle. The coal from this mine is hauled on a tram-road around the foot of the hill to the tippie a distance of about 1,300 feet. The roadways within the mine were generally good, as was also the drainage good. The mine doors were in fairly good condition, and the air good. As the fan was not in operation at the time of the inspection no measurement was taken of the air current, yet there was a fair circulation of air throughout the mine, due to natural causes. A new drift is being driven into this seam of coal about one mile down the river from this mine, in which are employed six miners and a mine foreman.

O. TIBBETS, Supt.

JOHN ROWLAND, Mine Boss

DAVIS COAL AND COKE COMPANY.

No. 76.

TYSON GAS MINE.

This mine, located at Savage, operates what is known as the Tyson coal, which is the nearest to the top of the mountain. The coal from this mine is let down the mountain on three inclined planes of a total length of 4,200 feet to the W. Va. C. & P. R. R.

On February 13th, 1901, an inspection was made of this mine. The roof throughout the mine has to be timbered. The roadways were found generally good; the drainage good; mine doors only in a fair condition; break-throughs were being kept driven up fairly well, and the ventilation throughout the mine is fairly good. The condition of ropes and all machinery was good.

O. TIBBETS, Supt.

JOHN B. RANKIN, Mine Boss.

DAVIS COAL AND COKE COMPANY.

No. 77.

SAVAGE FOUR FOOT MINE.

On February 12th, 1901, this mine was visited and an inspection made. The roadways were generally good, and the mine doors were in fair condition. The break-throughs between rooms were being kept up fairly well, but in some places rooms are being turned inside of the last break-through, which causes the air to be quite close and warm. The mine is known as the "Four Foot Seam", but it will not average more than 30 inches in thickness. There are some very heavy grades in some of the haul-ways, and this requires great care to avoid accidents. The roof is not by any means good. The coal from this opening is let down two inclines, a distance of 3,600 feet to the railroad tippie.

O. TIBBETS, Supt.

PETER N. MESSENGER, Mine Boss.

DAVIS COAL AND COKE COMPANY.

No. 78.

WINDOM NO. 3 MINE.

The above mine was visited and inspected on February 13th, 1901. This mine, which is a drift, is about finished, as there are but a few pillars to be drawn, and only a few miners can be worked, as the place has

to be all timbered. The men are working within sight of daylight. The roadways were found to be in good condition, as was also the drainage. The air was found to be sufficient, the mine being ventilated by natural causes.

O. TIBBETS, Supt.

JAMES B. RANKIN, Mine Boss.

DIVIS COAL & COKE CO.

No. 79.

WINDOM NO. 4 MINE.

This mine is operating the Pittsburg seam. On February 13th, 1901, an inspection was made of this mine. Few miners were employed, since only a few pillars were to be drawn. The roadways and drainage were found to be good. There were no doors within the mine. The coal from this mine is let down three inclines a distance of 4200 feet to the railroad tippie on the W. Va. C & P. R. R. The coal is first hauled from the drift mouth by horses, a distance of one mile around the top of the mountain to the head of the Windom No. 3 incline.

O. TIBBETTS, Supt.

JAMES B. RANKIN, Mine Boss.

DAVIS COAL AND COKE COMPANY.

No. 80.

WINDOM NO. 5 MINE.

This is a drift mine operating the Pittsburg seam, and is a part of a mine that was worked and abandoned many years ago. This, however, is a new drift opening into old workings to get some pillars that were left when the mine was abandoned, and this project has been a success in that a great many good pillars have been found, which it will take a few miners a long time to work out. The coal from this drift is hauled on a tramroad around the mountain to the head of the third incline, a distance of one mile, where it is let down the three inclines a distance of 4,200 feet to the tippie.

On February 13th, 1901, this mine was inspected, when the roadways and drainage and mine doors were found in good condition. The air current, which is produced by natural causes, was good, as the employes were in sight of daylight.

O. TIBBETTS, Supt.

JAMES B. RANKIN, Mine Boss.

W. VA. C. & P. RAILWAY COMPANY.

No. 81.

ELK GARDEN NO. 6 MINE.

The above mine was visited and inspected on February 14th, 1901, when it was found that only nine rooms were being worked in the mine. The balance of the work was the removal of pillars. This mine is ventilated by natural causes. The roadways were found to be in good condition. There are no mine doors in use within the mine, and there are six separate openings. A strong current of air is in circulation in all of them.

W. T. BLACKISTON, Supt.

F. WILSON, Mine Boss.

SMITH BROTHERS COAL COMPANY.

No. 82.

SMITH MINE.

This is a new mine one mile south of Harrison station on the W. Va.

C. & P. R. R., operating the six foot coal, which is about 5 ft. 8 inches in thickness at this point. About one foot from the bottom of the seam is a slate or bone coal about 3 inches thick, and a slate about the centre of the seam ranging in thickness from 9 inches to 12 inches. This mine is reached by an incline 250 feet long and a tramroad about 1200 feet long from head of incline to the drift.

On February 14th, 1901 this mine was inspected, when the ventilation, distribution of air, drainage of working places, condition of ropes and all machinery were good; condition of roof fair; general safety fair.

R. A. SMITH, Supt.

H. B. SMITH, Mine Boss.

MONONGALIA COUNTY.

CONDITION OF MINES REPORTED BY T. E. THOMAS.

MARIETTA COAL AND COKE COMPANY.

No. 83.

OPEKISKA MINE.

This mine was visited and inspected on June 17th, 1901. This was formerly the property of the Opekiska Coal & Coke Company. The ventilation of the mine in quantity was sufficient for all purposes, but the distribution of air was very ordinary, some working places receiving little, if any, benefit from the current. The ventilation here is natural. The main outlet air current was measured with the above result, and as the intake current was received from an almost innumerable number of crop holes a measurement of it was considered impracticable. The drainage here was also found to be given very little attention, and the roadways in many places were in a deplorable condition. Carbon oil was found in general use. Attention was called to these violations, and a prompt compliance was promised.

JOHN H. UNKER, Supt.

MICHAEL CALLAHAN, Mine Boss.

BRIAR HILL COAL AND COKE COMPANY.

No. 84.

BEECHWOOD MINE.

On June 10th, 1901, the above mine was visited and inspected. This is a drift opening; or rather, the colliery consists of two drift openings, the first being driven through the hill, and the haulway continued a distance of about 1200 feet and into another hill a distance of 425 feet, where it is the intention of entering under the third hill. The ventilation, which is produced by natural causes and a furnace, is ample in quantity, but the distribution, while not bad, could be readily improved upon, as it is not carried to the working faces to the extent that it might be. The work being all to the rise, the drainage is good.

WEBB FERGUSON, Supt.

S. M. FERRELL, Mine Boss.

OHIO COUNTY.

CONDITION OF MINES REPORTED BY JERRY MEADE.

T. E. KASLEY & SON.

No. 85.

WHITAKER MINE.

This mine was inspected on January 28th, 1901. This mine is owned by

the Whitaker Mill Company, and is operated by Harry Kasley. The roadways were found good, but the mine doors were in poor condition. The brattice in many places was leaking quite badly and a request was made that this be repaired.

Again on June 13th, 1901 this mine was inspected, when it was found in a fairly good condition in so far as air and drainage is concerned. The roadways were generally good. The mine doors were in need of considerable repair. The roadways were dry and dusty, and a request was made that they be sprinkled at once.

HARRY KASLEY, Supt.

WM. McGRUDER, Mine Boss.

JOHN P. GILCHRIST.

No. 86.

RICHLAND MINE.

On February 4th, 1901, this mine was visited and an inspection made, when it was found that the roadways were in generally good condition. The mine doors were also in good condition, and the break-throughs between rooms were being kept driven fairly well. The second opening was found to be through a side door from the furnace opening, and about 25 feet from the main entrance.

On June 20th, 1901, this mine was again visited, when it was found in good condition in regard to air and drainage. The mine doors were also in good condition.

This mine has recently been idle for eight weeks, by reason of a strike for a scale of rates, and had resumed only a few days prior to my last visit.

ROBERT GILCHRIST, Supt.

JOHN G. AITKEN, Mine Boss.

ELM GROVE COAL COMPANY.

No. 87.

ELM GROVE SHAFT.

This is a shaft mine operating the Pittsburg coal, at Elm Grove on the W. & O. Division of the B. & O. Railroad.

This mine was inspected January 30th, 1901, when the roadways were found to be dusty, but otherwise in a good condition. The mine doors were in very good condition, and the break-throughs between rooms were being kept up fairly well. The cages in the shaft had no safety catches on them, and the hoods on the cages were broken and practically useless. No safety gates were at the head of the shaft. After a careful examination of the mine, no trace of gas was found in any of the working places. The management was directed to sprinkle the mine as often as necessary to keep down the dust.

On June 17th, 1901 this mine was again inspected, when it was found that the air course a short distance from the foot of the shaft was too small to admit of proper ventilation, and a request was made that it be enlarged. It was again observed that no safety catches were on the cages, and no improvement had been made on the hoods, and no tube was in use for communication between the top and the bottom of the shaft. It was noticed that one strand of the hoisting rope was broken. The mine

again was noticed to be in a dry and dusty condition, and a request was made that it be sprinkled.

J. B. CHAMBERS, Supt.

JOHN COSTELLO, JR., Mine Boss.

REYMAN BREWING COMPANY.

No. 89.

MANCHESTER MINE.

This mine has been in operation upwards of thirty years, and in the past twelve years has been operated by several different persons. There seems to be no accurate map of the old workings, and from information obtained from persons familiar with the mine it was learned that large portions of the old workings have fallen in.

On January 28th, 1901, this mine was visited and inspected, when it was found that a portion of the main haulway was quite muddy and needed to be timbered. The air was found quite bad, and a fan should be put in at this mine instead of depending upon the fan at the Whitaker mine.

Again on June 13th, 1901, this mine was inspected, when the air was found to be very bad and the roadways in a large portion of the mine very wet and muddy. There were also many dangerous places along the main haulway that were in need of timber. The product of this mine is consumed by the Reyman Brewing Company.

CHAS. SMITH, Supt.

JOHN REYNOLDS, Mine Boss.

WHEELING STEAM & GAS COAL COMPANY.

No. 90.

McKINLEY MINE.

This is a new mine, and at the time of inspection (January 29th, 1901) had been in operation only a short time. An air shaft has been sunk and a wooden stack built on the surface about 12 feet high, but no furnace has yet been built. The mine is being worked on the double entry system, and rooms turned off the two entries. At the first connection made between the two entries a door should have been built, but this has not been done. It was also found that the entries were driven 222 feet beyond the last break-through, and a request was made that a break-through be driven at once and a door constructed and so hung as to conduct the air current in the main entry to the face of the workings.

On June 11th, 1901 this mine was again visited and an inspection made. The employes at this mine had just resumed work after a strike of eight weeks duration, which was inaugurated by the refusal of the men to drive rooms 20 feet wide with the road along the rib. The employes also demanded pay every two weeks. The strike was settled by granting a semi-monthly pay and permitting rooms to be 24 feet wide, with the road in the center.

E. L. CALDWELL, Supt.

GEORGE BEARUM, Mine Boss.

JOCHUM COAL COMPANY.

No. 91.

JOCHUM MINE.

This mine was inspected January 29th, 1901, when the mine doors were found to be in good repair, road-ways generally good; the ventilation and

distribution of air fair. The product of this mine is used for local domestic consumption. No second opening was found at this mine complying with the statutes. Few men are employed within this mine.

JOHN JOCHUM, Supt.

PRESTON COUNTY.

CONDITION OF MINES REPORTED BY T. E. THOMAS.

AUSTEN COAL AND COKE COMPANY.

No. 92-93.

AUSTEN MINE.

This mine is a drift, located at the west end of Murray on the B. & O. Railroad, operating the Upper Freeport coal.

On March 28th, 1901 this mine was visited and inspected. The ventilation was found to be very ordinary. The fan, which was working on the Plenum system, was doing good work, but owing to the roof in the main air course having fallen very high in some places, thus contracting the area, and stoppings between it and the old works being loose, the larger portion of the current was lost. The Company was, with all possible diligence, engaged in driving another double outlet to the eastern boundary of the territory, one of which was to be an air course and the other a man-way. The roadways were found to be very muddy, and in some places almost covered with water. The timbers in the main slope were noticed to have an appearance of dry rot, and to be heavily laden with the great quantity of fallen strata. This dry rot is caused by a steam line, which was ordered to be covered with asbestos or some other protection, slate taken down, and the timbers relieved of their weight.

WILLIAM HORCHLER, Supt.

J. R. COOK, Mine Boss.

NEWBURG COAL AND COKE COMPANY.

No. 94.

NEWBURG SHAFT.

This operation, located at Newburg twelve miles east of Grafton on the B. & O. Railroad, is a shaft opening. The shaft is 365 feet deep. At a point 176 feet from the surface the Upper Freeport coal is being mined, the remaining section of the shaft being full of water. The Freeport seam at this place is immediately overlaid with a sandstone roof. The coal is four feet thick, and clear. The ventilation was found to be good, particularly in the main heading and air course, where considerable gas is generated. The general distribution of the air was very fair. It was noticed though, that the area through which the current from the working faces of the main heading passes to the other sections of the mine was very much contracted, caused by brattice being too close, together with the storing of slate taken up from the roadway. This very much retarded the air in its passage to the other sections of the mine. Again, it was noticed that this current, coming in first to those headings which were the only ones generating fire damp, was allowed to travel through all working faces laden with the gas. It is the opinion of the inspector

that the mine should be ventilated by separate splits, which should return direct to the main return airway, thereby insuring the safety of men in other sections of the mine. The second opening at this mine is the return air shaft. This meets the requirements of the law in so far as its distance from the main shaft is concerned, but in case of an accident it would hardly meet the requirements, since a light could not be kept burning in this return air laden, as it is, with explosive gas. Therefore, it cannot be considered a means of safety. Outside of rather wet and muddy roads in several places, this mine was found in a fair condition, with the exceptions referred to above.

ROBERT BENNIE, Supt. and Mine Boss. WM. MCGINNIS, Fire Boss.

GORMAN COAL AND COKE COMPANY.

No. 95.

WEST END MINE.

This mine, owned and operated by the above company, is a drift operating the Upper Freeport coal at the west end of the Kingwood tunnel on the B. & O. Railroad. The ventilation here was found to be very good, ample for all purposes, and a number of men and animals employed. The current was well distributed, with the exception of one small section which was somewhat smoky, due to a break-through that had not been closed. In this mine is found a genuine sandstone roof, and while the evidence of its abuse in the past is very apparent by the driving of unreasonably wide rooms and headings, the condition of the roof is perfect. The present operators have securely timbered it in many places with good strong props, and all working places are being driven a proper width, which greatly improves the appearance and general safety of the mine. It was also noted that all stoppings between air courses were new and carefully constructed. With the exception of some dirt in the second opening, this mine was in good shape. The mine is ventilated by means of a furnace, and the mine is practically dry. Date of inspection, March 28th, 1901.

ROBT. MAGRAW, Supt,

MICHAEL SULLIVAN, Mine Boss.

IRONA COAL COMPANY.

No. 97.

IRONA MINE.

This mine operates the Upper Freeport coal 7 1-2 miles from Tunnelton on the line of the W. Va. & N. Railroad.

On March 28th, 1901, this mine was inspected. The air was fairly well distributed, with the exception of one section, it being a cross section which was very smoky in the working face. The ventilation is produced by a 4 by 10' fan of the S. B. Stein make, which was doing very good work. At this mine no second opening such as the law requires was found. One opening caused by a fall was pointed to as such an opening, but it was without a ladder or any arrangement for travel. In fact, it was unsafe, for the reason that it was not timbered, and a body of earth and strata were so loose and open as to be liable to fall in at any time.

Instructions were given to timber this for temporary use, and to begin a second opening at once.

A feature in the operation of this mine is the heavy grades encountered at some points. The plant is equipped with a 50 H. P. haulage engine, a 40 H. P. fan engine, two 72 inch by 60 ft. boilers of 100 H. P. each.

F. C. TODD, Supt.

J. M. HENRY, Mine Boss.

MERCHANTS COAL COMPANY.

No. 98.

TUNNELTON MINE.

This mine is located at Tunnelton on the B. & O. Railroad, and operates the Upper Freeport coal.

On March 19th, 1901, this mine was inspected. The general condition of this mine was good as regards safety, it having a sandstone roof in all three openings, except in one section of No. 2 on south side where there is a slate top, which presents a somewhat ragged appearance. It is carefully and systematically propped, and there seems to be no dearth of timber in the working places. The fan, which is of the Helmick make 6x15, built in a splendid fan house of brick and stone and operated by a 60 H. P. electric motor, would under favorable circumstances produce satisfactory results, but the evil of poor doors and stoppings on the inside is very apparent. As a result, much of this splendid current is allowed to return without ventilating the working places. Pools of water were noticed over the track in some places. The headings are driven sufficiently wide to render travel safe.

No. 1 opening is ventilated by a furnace. This is a section being driven through the hill to a point alongside of the B. & O. R. R., where the Company proposes building large and improved bins for the purpose of coal-ing engines, and dispensing with Sunday work. At this plant were found two 72 inch by 18 ft. boilers of 160 H. P. each; one 100 K. W. electrical generator; Morgan & Gardner electrical cutting machines, and one dynamo engine. The coal at this mine is 4 1-2 feet thick.

JOSEPH MILLER, Supt.

W. F. HARVEY, Mine Boss.

WALTER SNYDER, Fire Boss.

OAKLAND COAL AND COKE COMPANY.

No. 99.

OAKLAND MINE.

This mine is located at Corinth on the line of the B. & O. Railroad. No inspection was made of this mine during the year.

R. I. ANDERSON, Supt. and Mine Boss.

KINGWOOD COAL COMPANY.

No. 100.

HOWESVILLE MINE.

This mine is operated on the W. Va. Northern Railroad at a point five miles northeast of Tunnelton, and is a new mine, main heading and air course having been driven 350 feet, and at the time of inspection (March 20th, 1901) first pair of cross-headings were just begun. The seam worked

is the Upper Freeport, which when natural is about 4 1-2 feet thick, but at this place was suffering a pinch, the thickness being a little better than 3 1-2 feet. All the work was to the rise, and as a result no water was to be seen within the mine. The ventilation, which is produced by a furnace, is good, but break-throughs might have produced a better result. The coal at this mine being much below the level of the railroad, is hauled up an incline by a single rope to the tippie. No second opening was found at this mine, and instructions were given to make one at once.

E. E. EVANS, Superintendent.

HITE COAL COMPANY.

No. 101.

HITE MINE.

• This is a drift opening in the Upper Freeport coal 4 feet in thickness, and is located about one-half mile east of the Vulcan mine but on the opposite side of Raccoon Valley. The ventilation of the mine is produced by means of a furnace, and was found ample for all purposes if properly economized and used. The ventilation at the furnace registered 7000 cubic feet per minute, but the intake at the face of main heading, a distance of 450 feet, showed a leakage of almost 1000 feet, which was due to poor construction of doors and brattices. The few rooms were very smoky, demonstrating a very poor system of distribution. No second opening was provided at this mine. The mine foreman was notified of this fact, and the superintendent by mail later. The main heading at this mine was stopped at a distance of 426 feet from the mouth, owing to a fault which had cut the coal out entirely. The first large cross heading was also suffering a pinch at the face, the coal barely reaching 3 feet in thickness.

JOHN Y. HITE, Supt.

ALF FORTNEY, Mine Boss.

ORR COAL AND COKE COMPANY.

No. 102.

VULCAN MINE.

This operation is located three miles east of Newburg on a branch of the B. & O. Railroad following the course of Raccoon creek, and is owned and operated by the above company. The coal operated is the Upper Freeport, which is 4 feet 3 inches thick, and overlaid by only a fair roof, it being a mixture of sandstone and slate of a very scaly nature. It falls in flakes of from three to four inches thick. The prominence of kettle bottoms was noted in this roof. The drainage could be called good, with the exception of one or two places where water was found in the working faces. A hand pump was placed at this point, and at the time of inspection (March 27th, 1901), was in operation. The ventilation, which is produced by a furnace, was measured at a point where it first began the return and later at the drift mouth, showing a loss of 780 cubic feet in a remarkably short distance, which was due to very poor construction of doors and brattices. It was noticed in many places that slate which had fallen was allowed to accumulate on the road side, and thereby greatly add to the inconvenience and unsafety of drivers, especially in a vein of this thickness. No second opening was found at this mine, and atten-

tion was called to this violation, and instructions given for the making of a second opening, and immediate compliance was promised.

J. M. ORR, Supt.

W. G. DEAHL, Mine Boss.

TAYLOR COUNTY.

CONDITION OF MINES REPORTED BY T. E. THOMAS.

DAVIS COAL AND COKE COMPANY.

No. 107.

NEW YORK MINE.

This mine is a drift operating the Pittsburg coal at Simpson on the Parkersburg Branch of the B. & O. Railroad.

On May 6th, 1901 an inspection was made of this mine, when it was found to be in the following condition:

The ventilation, while fair, could be readily improved upon, as the quantity while being equal to the minimum requirements should under the circumstances be better. To overcome, or rather to remedy it, the management is driving a heading to daylight for the purpose of constructing another furnace, making two splits of air instead of one current for the ventilation of the whole mine. A fan was suggested as a better means of ventilation, but it was stated that another opening on another side of the property and to the rise of the same was under contemplation, and for that reason the expense of a fan was considered unwarrantable until a change to a permanent opening was made. The roof was in good condition, as was also the drainage. The break-throughs were found to be driven too far apart, and attention was called to this fact.

L. B. BRYDON, Supt.

W. M. DRAINER, Mine Boss.

ROSEMONT COAL AND COKE COMPANY.

No. 109.

ROSEMONT MINE.

This is a drift opening in the Pittsburg seam 8 feet thick and remarkably free from impurities. The location is Rosemont, ten miles east of Clarksburg on the Parkersburg Branch of the B. & O. Railroad, and is operated by the above company. The product of the mine is hauled to the tippie on an incline 1050 feet in length.

The mine was inspected on April 30th, 1901, and found in the following condition:

The ventilation could scarcely be termed fair, for the reason that the current found to be in circulation, caused by natural conditions, and measured at the intake, does not meet with the requirements of the law for the number of men and animals employed. Again, there is no attention to distribution of the current, as the doors without one exception were found standing open, allowing the current to pass from intake to outlet without passing through working faces. With proper care this can be overcome, by the construction of stoppings and closing of doors. All other openings, driven to the crop and found to be intakes, if properly dealt with will result in an amount of ventilation sufficient for all purposes. A rule exists here preventing blasting until a late hour in the evening, and it was found to be complied with, and as a result no powder

smoke was found. But the use of bad oil is evident, as by the smoke found in the working faces. The condition of the top is very good, and drainage excellent. Attention was called to the violations mentioned and immediate attention requested, which was promised.

J. W. FAHEY, Supt.

FRANK SAVAGE, Mine Boss.

Other mines in this county, which were not inspected during the year, are as follows:

GRAFTON COAL AND COKE COMPANY.

No. 103. *FAHEY MINE.*

No. 104. *SANDLICK MINE.*

FLEMINGTON COAL AND COKE COMPANY.

No. 105. *FLEMINGTON MINE.*

COLONIAL COAL AND COKE COMPANY.

No. 106. *TYRCONNELL MINE.*

B. F. RADABAUGH & COMPANY.

No. 108. *FOSTER MINE.*

TUCKER COUNTY.

CONDITION OF MINES REPORTED BY JERRY MEADE.

CUMBERLAND COAL COMPANY.

No. 110. *DOUGLAS MINE NO. 1.*

This mine was inspected February 19th, 1901. The roadways were found good, but the mine doors needed some repairs, which Mr. Jenkins, the superintendent, promised to have done. A rope haulage delivers the coal from the mine to the tipple. Break-throughs between rooms are being kept up fairly well. The roof in this mine is quite bad, and frequently the slate gets as thick as 4 feet. The ventilation, drainage of working places, condition of ropes and all machinery good. The distribution of air, general safety and refuge holes fair.

J. B. JENKINS, Supt.

GEO. JENKINS, Mine Boss.

CUMBERLAND COAL COMPANY.

No. 111. *DOUGLAS MINE NO. 3.*

On February 19th, 1901, an inspection was made of this mine. This mine has been in operation about one year, and is in fair condition. It has natural ventilation, and the air is quite close and warm, and a fan or furnace should be put in at once, which Mr. Jenkins, the superintendent, promised to have done in the near future. The mine is about one mile from the tipple, and the mine cars are hauled to the tipple by a.

steam locomotive. The roof is fairly good when the draw slate is taken down. The distribution of air and general safety of the mine is fair. The drainage of working places, condition of ropes and all machinery good.

J. B. JENKINS, Supt.

D. M. HARR, Mine Boss.

No. 112.

Douglas Mine No. 4, operated by the above company, was visited on February 19th, 1901, when it was found that the mine had been abandoned some four months previous.

DAVIS COAL AND COKE COMPANY

No. 113.

THOMAS DRIFT MINE.

On February 16th, 1901, this mine was inspected. On that day the mine was idle, but an inspection was made of the mine, and it was found to be in fairly good condition. The roadways and mine doors were in good condition. The break-throughs between rooms were being kept driven up fairly well. The roof in this mine is quite good, but is being neglected by not setting sufficient timber to make it safe. Miners are supposed to load the timber into mine cars on the outside of the mine. The ventilation, which is produced by a fan, drainage of working faces, condition of ropes and all machinery good. Distribution of air and general safety, fair.

LEE OTT, Supt.

WM. BARRACKS, Mine Boss.

DAVIS COAL AND COKE COMPANY.

No. 114.

THOMAS SHAFT.

February 16th, 1901, this mine was visited. This mine is ventilated by means of an exhaust fan, which gives fairly good results. The shaft and all machinery were found in good condition. A portion of the roadway is quite wet and muddy. Break-throughs are kept driven fairly well, but the closing of break-throughs between entries is neglected to some extent. The air course has some heavy falls in it, and Mr. Ott, the superintendent, promised that he would have a new air course driven at once. The stationary engine near the bottom of the shaft, which is used for hauling coal up a grade, causes that section of the mine to be quite warm, as there is considerable steam exhausted. It was suggested that compressed air be substituted for steam, as compressed air pipe passes nearby the engine.

LEE OTT, Supt.

J. G. BOYD, Mine Boss.

DAVIS COAL AND COKE COMPANY.

No. 115.

THOMAS DRIFT NO 3.

This is a new opening on the opposite side of the railroad from the shaft mine, and is in fair condition for air and drainage. Roadways were good; mine doors in fairly good condition. Break-throughs between

rooms are being kept up fairly well. The roof is fairly good where the draw slate is taken down and relieved, in thickness from 8 inches to 10 inches. At present the mine is ventilated by natural causes.

LEE OTT, Superintendent.

J. E. OTT, Mine Boss.

DAVIS COAL AND COKE COMPANY.

No. 116.

COKETON NO. 1 MINE.

On February 18th, 1901 this mine was visited and inspected, when the roadways and mine doors were found in fairly good condition. There are two pumps in this mine operated by compressed air and one by electricity. One of the entries from this mine has been driven into one of the entries of the Thomas Shaft, which gives a fair way of escaping in case of emergency. The roof is quite bad and dangerous. The ventilation, general safety, drainage of working places and condition of all machinery good. Condition of roof and distribution of air fair. A new power house has been built at this plant. The H. P. of the engine is 600, and a generator of 150 K. W. capacity has been installed. There was also installed a 250 K. W. generator for direct current. The current from this power house is used for operating practically all the machinery in and about the Coketon mines.

J. C. BRYDON, Supt.

A. G. SMITH, Mine Boss.

DAVIS COAL AND COKE COMPANY.

No. 117.

COKETON MINE NO. 2.

The top strata of the coal in this mine is left for a roof, which makes it quite safe for working. The roof is quite bad and dangerous where the top coal and slate are taken down. Break-throughs are being kept up fairly well. The ventilation, which is produced by a fan, is good. The drainage of working places and condition of ropes and machinery are good. The roadways are generally fair; mine doors are in fairly good condition. This company is building a large store and office building between Thomas and Coketon.

J. C. BRYDON, Supt.

A. G. SMITH, Mine Boss.

DAVIS COAL AND COKE COMPANY.

No. 118.

COKETON MINE NO. 3.

This mine was found to be in fairly good condition for air and drainage. The roadways and mine doors were in fairly good condition; the roof in this mine is not good, and needs close watching by the miners, to insure safety. The mine produces a large quantity of water, which keeps a portion of the roads quite wet and muddy. There are two electric pumps and three other pumps operated by compressed air used for pumping the water out of this mine. Two 14 ton electric motors are used for hauling the coal out of this mine. The ventilation, which is produced by a fan, is good, but the distribution of air could be improved upon.

J. C. BRYDON, Supt.

C. H. BICE, Mine Boss.



JERRY MEADE.

GRANT COUNTY.

CONDITION OF MINES REPORTED BY JERRY MEADE.

DAVIS COAL AND COKE COMPANY.

No. 119.

HENRY SHAFT.

On February 15th, 1901, this plant was visited. This is a new shaft that is being sunk, ground having been broken on February 15th, 1900. It is 10 feet by 24 feet in the clear, and on date of visit was down about 203 feet. The first 150 feet was driven through fire clay, shale and bone, and the last 50 feet through a hard white sandstone. The timber that is being used is 10x10, placed 20 inches apart. The shaft is very wet, and requires the use of seven pumps to keep the water out, five of the seven being constantly in use. The shaft is located on the line of the W. Va. C. & P. Railroad at Henry, ten miles north of Thomas. The first coal seam that will be reached is that now being worked in the Thomas Drift and known as the Upper Freeport coal. It is the intention to sink this shaft to the Davis, or Kittanning, seam.

B. S. PHILLIPS, Superintendent.

RANDOLPH COUNTY.

The following is a list of commercial coal mines in the above county, but which were not inspected during the year for reasons assigned in the beginning of the chapter on condition of mines.

F. P. REASE.

No. 120.

RANDOLPH MINE.

JUNIOR COAL COMPANY.

No. 121.

HARDING MINE.

MARYLAND SMOKELESS COAL COMPANY.

No. 122.

WEAVER MINE.

CHAPTER XXI.

SECOND INSPECTION DISTRICT.

* Including the counties of

Braxton,
Calhoun,
Cabell,
Clay,
Gilmer,

Jackson,
Kanawha,
Mason,
Pleasants,
Putnam,

Ritchie,
Roane,
Wayne,
Wirt,
Wood.

JERRY MEADE, *Inspector*,

Charleston, W. Va.

By reason of the sudden death of Mr. Jerry Meade on July 2nd, 1901, just two days after the close of the fiscal year, no written report is submitted for the Second Mining District.

and the superintendent was requested to have them made so as to comply with the law. The coal in this mine being shot on the solid, the mine soon becomes filled with powder smoke.

On the last inspection this mine was found to be in fairly good condition for air and drainage; the roadways generally good; the mine doors still in need of repair. No safety blocks were in use at the head of the incline, and the superintendent was requested to have these put down at once.

L. W. COUCH,

N. C. POSTEN, Mine Boss.

J. A. SHERMAN, Supts.

J. G. VAUGHAN COAL COMPANY.

No. 124.

GRAHAM MINE.

This mine during the fore part of the year was operated by the Graham Coal Company, but in the month of September, 1900 it passed into the hands of the above named company.

Three inspections were made of this mine during the past year. On the first inspection (August 9th, 1900) the mine was found in a better condition than it was on the previous visit, as a new opening has been driven out to daylight from that portion of the mine where the air was quite bad.

This mine was again visited on November 20th, when it was found to be in a better condition than upon the previous inspection. A portion of the mine was found quite dusty, and a request was made that it be sprinkled which the superintendent promised to do at once.

On the inspection made on May 8th, 1901, it was found that the ventilation was close, and that a fan or new furnace was badly needed. Mr. Vaughan, the superintendent, promised to have one of these in use in the near future.

W. W. GRAHAM,

J. G. VAUGHAN, Mine Boss.

J. G. VAUGHAN, Supts.

ELK RIVER COAL AND COKE COMPANY.

No. 125.

QUEENS SHOALS MINE.

This mine was visited on November 22nd, 1900, when it was found that the only work being done was the driving of entries.

This is a new mine operating a seam of coal 4 feet thick, having a thin band of slate near the center. No safety blocks were in use at the head of the incline, and a request was made that they be placed at once.

On April 24th, 1901, this mine was again inspected, when the roadways were found to be in generally good condition, the mine doors in a fair condition, and no second opening. The safety blocks which were requested placed at the head of the incline had not been provided, and a second request was made that these blocks be attended to at once and that a second opening be made, both of which Mr. Bean, the superintendent, promised to have done.

W. H. ATCHINSON,

G. D. YOUNG,

MICHAEL BEAN, Supts,

H. T. TRECKER, Mine Bosses.

GEORGE T. TYLER.

No. 125-A.

SYCAMORE MINE.

This mine was visited three times during the year and was found idle on the first two visits.

On May 8th an inspection was made, when the ventilation, distribution of air and condition of second opening were fair. The condition of roof general safety and drainage of working places good.

This mine resumed operations about February, 1901 after an idleness of eight months.

A new opening is being driven as rapidly as possible for the purpose of erecting a furnace, which when completed will put the mine in a very good condition. It was found that two break-throughs were needed to be driven between rooms, and Mr. Tyler, the superintendent promised to have them driven at once.

GEORGE T. TYLER, Supt.

C. C. & S. R. R. CO.

No. 125-B

BLYTHE MINE.

On August 7th, 1900 an inspection was made of this mine. This was formerly operated by Carson & Son, but on June 1st, 1900 the C. C. & S. R. R. Co., took charge of it and have up to the date of inspection been getting coal from it to supply locomotives. The inspector was informed that this mine will be abandoned within a short time. This company is opening a new mine about three-fourths of a mile farther up the river, and the old tippie will be removed to the new mine shortly.

C. K. McDERMOTT, Supt,

WALTER WOODS, Mine Boss.

*KANAWHA & MICHIGAN R. R. CO.**CAMPBELL'S CREEK COAL COMPANY.*

No. 126.

NEW CALDERWOOD MINE.

This mine was visited on three different times during the year and two inspections made, the mine being idle upon the first visit. Electric mining machines are being used in mining the coal.

On December 11th the roadways and mine doors were generally in good condition, and the break-throughs between rooms were being kept up fairly well. Machine oil was being burned by the drivers and some day men, and this was requested to be discontinued.

On April 8th the mine was found to be in a better condition than on the previous visit. However, the air at the head of the workings was not good. There was a fair circulation of the air, but it was very much contaminated by the smoke from the lamps and other causes peculiar to a mine. Preparations were being made to change the fan from its present location to a point around the hill, which will shorten the distance the air now travels by about three miles, and when this is completed better results are anticipated.

J. E. DANA, Supt.

W. B. CALDERWOOD, Mine Boss.

CAMPBELLS CREEK COAL COMPANY.

No. 126—A.

SPRING FORK MINE.

Two regular inspections were made of this mine during the year and a third visit made to the mine, when it was found to be idle. The greater portion of this mine was formerly operated by electric mining machines, but these machines have been removed to the New Calderwood mine. The men employed within this mine are engaged in drawing room pillars and entry stumps.

On December 10th the roadways were in fairly good condition and mine doors were not all self-closing. The roof was quite bad in some sections, and the assistant mine boss, Mr. Carter, was cautioned to visit all bad places as often as possible and to keep plenty of timber on hand.

On April 9th, 1901, this mine was in fairly good condition for air and drainage; the roadways and mine doors generally good. Some parts of the mine was quite dry and dusty, and a request was made that these parts be kept sprinkled. There was some loose slate and stone hanging in some of the entries, and a request was made to Mr. Krautz assistant mine boss, to have this taken down, and to also see that some of his miners do not become careless in regard to properly timbering their working places.

J. E. DANA, Supt.

W. B. CALDERWOOD, Mine Boss.

The White Mine of the above company was visited at three different times during the year, upon each of which visits it was found to be idle.

NEW DIAMOND COAL COMPANY.

No. 128.

BLACK DIAMOND MINE.

This mine was in fairly good condition for air and drainage on April 10th, 1901; the roadways were generally good, but the mine doors needed some repairs. The 7th and 8th left entries were very wet, and water covered the rails in parts of them. Mr. Arrington was requested to have this water removed as soon as possible and to haul his miners over this wet section to and from their work until the water is removed from the roadway, all of which he promised to do as soon as he could have a new water car built. The draw slate in this mine is from 3 inches to 9 inches thick and quite dangerous when kept up, but when taken down it leaves a good roof.

ARTHUR ROBINSON, Supt.

JAMES ARRINGTON, Mine Boss.

QUINCY COAL COMPANY.

No. 129.

QUINCY MINE.

On October 25th this mine was inspected, when it was found that the old second opening had closed in and a new opening was being driven out. The mine boss, Mr. Kelley, promised to drive this as rapidly as possible.

On April 10th, 1901, this mine was again inspected, when it was found to be not in as good condition as on the former visit. The roadways were

generally good; the mine doors were badly in need of repair. The second opening referred to above had not been driven to daylight, and a second request was made that this be driven at once. Break-throughs between rooms had been neglected in this mine, some rooms having been driven as far as 200 feet ahead of the air. A request was made that the break-throughs be driven at once, and Mr. Hill, the mine boss, promised to have this done.

WM. DICKINSON, Supt.

J. M. KELLEY,

B. H. HILL, Mine Bosses.

PEABODY COAL COMPANY.

No. 130. *PEABODY, OR NORTH COALBURG, MINE.*

During the fore part of this year the roof in a part of this mine was noticed to be of a sandstone and little timbering was done by the miners, they claiming that timbering was not needed. The doors were not all self-closing, and the management was requested that they be made self-closing and that timber be set under the rock roof.

The mine on April 11th, 1901, was found to be in a fairly good condition so far as the air was concerned, but the drainage was not what it should be. The same being close to the surface, the water has easy access to the mine. An attempt is made to haul this water out in water wagons, and as a result the roadways are kept quite muddy. It was noticed that the roof of the second drum-house had holes in it caused by coal rolling on it, and a request was made that these holes be covered, so that men below may have some protection from coal that rolls off the cars on the top incline.

On June 15th, 1901, mine inspector, Earl A. Henry, visited this mine and reports the ventilation, which is produced by natural causes, as giving very little satisfaction. The mine was very wet and muddy, and the roads were in a poor condition. The system of drainage in use was very poor, the water and mud covering the road completely in some places. The roads were ordered to be put in such condition as to permit the men to travel the same without having to wade through water and mud.

J. A. CARTER, Supt.

J. J. NEWLAN, Mine Boss.

VICTOR COAL COMPANY.

No. 131. *MONARCH MINE.*

When this mine was inspected on July 17th, 1900, it was found to be in not as good condition as it was on the date of the former inspection. This was due principally to the many changes in the mine bosses. It was found that the furnace was filled with ashes, clogging the grate bars, and the stoppings in many places were not properly closed. The break-throughs between rooms had been neglected, and a request was made that these be driven at once. The drum at the head of the incline was quite loose, and the river tipple was found in a very bad condition.

On October 24th, 1900, the mine was found in a better condition all around than on the former visit. The roadways were generally good, and mine doors in fair condition. Break-throughs had been driven between

some of the rooms, thus giving fair circulation of air around the working faces.

On April 11th this mine was visited, when it was found abandoned.

P. E. SPRUCE, Supt.

H. T. TUCKER, Mine Boss.

VIRGINIA MINING COMPANY.

No. 132.

VIRGINIA MINE.

Four inspections were made of this mine during the year. In this mine are in use two Morgan-Gardner electric mining machines and two Jeffrey compressed air punching machines. The rooms in this mine are driven 80 feet wide, and the center of the room filled with slate, which is taken up from the bottom. A roadway is on each side of the room. An effort was made to ventilate these rooms without driving break-throughs, but it was found that a sufficient amount of air could not be gotten to the face of the rooms—so, during the spring a system of break-throughs was inaugurated. Explosive gas has made its appearance in four entries in this mine, namely: The Main Straight and its air course; the 9th Left and 3rd Klondyke entries. These entries are all inside of a fault that was recently driven through, and it is probable that these gas feeders will disappear in a short time. The management was requested to provide a safety lamp and have these places examined every morning before miners are allowed to enter the mine. The roof of this mine is generally good; parts of the roadway are dry, and it was requested that they be sprinkled.

HENRY DAVIS, Supt.

B. F. HULL, Mine Boss.

BIG MOUNTAIN MINING COMPANY.

No. 133.

SHOOFLY MINE.

Four inspections were made of this mine during the year. The ventilation, condition of roof, distribution of air, general safety, condition of ropes and all machinery, refuge holes and second openings fair; drainage of working places fairly good. Mine doors were not self-closing, and it was requested that they be made self-closing. The roof is quite bad in some sections of this mine and good in other parts. Considerable caution is used where the roof is bad. Break-throughs between rooms were being neglected considerably. A second opening has been driven at this mine during the year, which has made a considerable change for the better.

HENRY DAVIS, Supt.

J. W. GREEN, Mine Boss.

BIG MOUNTAIN MINING COMPANY.

No. 134.

DRUM-HOUSE MINE.

This mine is operating the Coalburg seam. The ventilation and drainage of working places good; condition of roof, distribution of air, general safety of mine, condition of ropes and all machinery, man-ways and second openings fair. This mine will be connected with the Shoo-fly Drift in a few days, which connection will give better ventilation in both mines. There is an old furnace stack in front of the exhaust fan, which probably obstructs the outlet to some extent. This was requested taken down. The

roof of a portion of this mine is rock, and the other parts slate and quite dangerous. The mine doors in this mine are not all self-closing, and it was requested that they be hung, so as to comply with the mine law. The break-throughs between the rooms were being neglected somewhat during the year. The superintendent was requested to remedy the defects mentioned above, and a promise was made that they would be remedied.

HENRY DAVIS, Supt.

J. W. GREEN, Mine Boss.

KELLEYS CREEK MINING COMPANY.

No. 135.

A—NO. 1.

This is a slope mine, and has not been in operation during the past year.

It was visited on July 18th, 1900, and found to be filled with water and the tippie torn down. The mine when in operation generated some gas, and just previous to its abandonment a miner was slightly burned with the gas.

J. W. DAWSON, Supt.

KELLEYS CREEK MINING COMPANY.

No. 136.

B—NO. 3.

This mine was visited on July 17th, 1900, when it was found to be not in operation, and no inspection was made. This was formerly known as the Staunton Coal Company Mine, and is in the Lewiston seam.

KELLEYS CREEK MINING COMPANY.

No. 137.

B—NO 4 or NO. 1.

This mine on April 17th was inspected for the third time during the year, when it was found in a better condition than on former visits. The roadways were in good condition, but the mine doors needed some repair. There is a good circulation of air through the entries, but break-throughs are being neglected. Rooms are being driven from 40 to 50 feet wide, and two necks are turned off the entries and a roadway on each rib and the gaub piled between both roadways, which causes some air to go to the face of the room when cars are hauled in or out; but this does not give sufficient air without the break-throughs in the pillars. The roof is good, and very little timber is being set. The second left entry was found very dusty, and it was requested that it be sprinkled sufficiently to lay the dust.

J. W. DAWSON, Supt.

W. H. MEASE, Mine Boss.

KELLEYS CREEK MINING COMPANY.

No. 138.

C—NO. 2, or NO 3.

The break-throughs between rooms in this mine are found to be neglected in some parts of the mine. The mine doors were not self-closing, and it was requested that the break-throughs be driven with greater regularity and that the mine doors be repaired. A fatal accident occurred on the incline of this mine, which was due to the rope man detaching the cars before they were safely over the top of the incline. For the details of this accident see the chapter on accidents.

On April 17th this mine was closed down, and the mine cars and mining machines were being transferred to the No. 2 mine. It is expected, however, that this mine will resume operations again in the early fall.

J. W. DAWSON, Supt.

WM. SHANNON,

J. A. JONES, Mine Bosses.

KELLYS CREEK MINING COMPANY.

No. 139.

C—NO. 3.

Upon the last inspection made of this mine (April 16th, 1901,) the mine was found in fairly good condition for air and drainage; the roadways generally good. The mine doors were quite badly in need of repair, and break-throughs between rooms were being neglected. The roof in this mine is generally sandstone, and appears to be safe, but there are many clay seams through the top, which, in the judgment of the inspector, may be the cause of loss of life if continued to be worked as at present. It was requested that a row of posts be set on each side of the roadway in single rooms and four rows in double rooms from six to eight feet apart, in order that the miners may detect any weight or squeeze that may come in their working places.

J. W. DAWSON, Supt.

WM. S. SHANNON,

W. G. McDANIELS, Mine Bosses.

KELLYS CREEK MINING COMPANY.

No. 139—A.

D—NO. 3.

This mine, formerly called the No. 5 Seam, has during the past year been abandoned.

KELLYS CREEK MINING COMPANY.

No. 139—B.

D—NO. 4.

This mine would be in a very fair condition if the break-throughs were driven between the rooms, as they should be, to permit the air to circulate around the working faces. The doors are not hung as they should be, and it is the opinion of the inspector that this condition is brought about by the frequent change in the mine bosses. The roads are generally dry, and dusty in some places. On two different occasions the mine boss has been requested to attend to the break-throughs and mine doors, but at the last inspection the promises which were made had not been complied with.

J. W. DAWSON, Supt.

JOHN HOLDEN, Mine Boss.

KELLYS CREEK MINING COMPANY.

No. 139—C.

NO. 4 MINE.

This mine was formerly known as the "Davis Mine", operated by Davis & Brown Coal Company. It was, during the year, absorbed by the Kellys Creek Mining Company. This mine was not in operation on the date of inspection, and had been idle for some time previous.

J. W. DAWSON, Supt.

KELLYS CREEK MINING COMPANY.

No. 139—D.

NO. 5 MINE.

This mine was, during the past year, opened by the above company, but at the date of this report no inspection had been made of it, for reason of its not working a sufficient number of men to come within the jurisdiction of the mine law.

J. W. DAWSON, Supt.

KELLYS CREEK MINING COMPANY.

"E" NO. 5 MINE.

This is a new mine, having been put in operation about January 15, 1901. The coal which is being mined is the No. 5 seam, and is from 5 to 6 1-2 feet in thickness. The mine is reached by an incline 413 feet long. The mine was found to be in good condition for air, but not so good in regard to drainage, as the entries were going to the dip and some trouble was had in keeping the water out. The roadways, generally good, and mine doors in fairly good condition. The largest portion of this mine has rock roof and no timber was being used. The company was requested to set a row of posts, from 6 to 8 feet apart, on each side of the room in all the rooms.

J. W. DAWSON, Supt.

WM. SHANNON, Mine Boss.

CEDAR GROVE COLLIERY COMPANY.

No. 140.

DRUM-HOUSE MINE.

This mine operates the Cedar Grove seam. On October 22nd it was noticed that the mine cars rubbed the sides of the entries in places, and the mine boss was requested to make the haulways wider to insure safety to people passing cars. The doors were not self-closing, and they were requested to be repaired.

The mine was again examined on April 12th, 1901, when it was found in about the same condition as when previously inspected. The air at the head of the workings was very close, and the outlet was mostly shut off by falls in several places. The attention of the mine boss was directed to these defects, with the request that they be remedied.

J. D. HARRIS, Supt.

CHAS. ARMSTRONG, Mine Boss.

CEDAR GROVE COLLIERY COMPANY.

No. 141.

SUNNYSIDE MINE.

Upon the inspection made of this mine on April 12th, 1901, it was found that the mine was quite wet and muddy by reason of recent heavy rains. The mine doors were in poor shape and were badly in need of repair. The air was quite close and warm at the head of the workings, and some few break-throughs between rooms were needed badly. The mine boss, Mr. Armstrong, was requested to have these defects remedied as speedily as possible, which he promised to do.

J. D. HARRIS, Supt.

CHAS. ARMSTRONG, Mine Boss.

CEDAR GROVE COLLIERY COMPANY.

No. 142.

NO. 5 SEAM.

This mine was opened during August, 1900, and is operating the No. 5 seam.

This mine was visited twice during the year, when it was found that the safety blocks at head of incline were defective. The attention of the superintendent was called to this matter, and he promised that the safety blocks would be put in repair. The air, which is produced by natural causes, was found to be good, but the timbering of the rooms was being neglected. The attention of the mine boss was called to the matter of timbering the rooms, with the request that more precaution be taken in the matter of timbering.

J. D. HARRIS, Supt.

C. W. ARMSTRONG,

P. F. NEYLAN,

CLARK HUDNALL,

Mine Bosses.

CEDAR GROVE COLLIERY COMPANY.

No. 142—A.

TUNNEL SEAM.

This is a slope mine that has not been in operation for the past three years, but upon the date of inspection (July 21st, 1900,) it was being pumped for the purpose of re-opening. As the mine is supposed to generate explosive gas, the superintendent was requested to secure a safety lamp and employ a competent man to examine the mine before the men entered in order to avoid any possible danger of an explosion.

J. D. HARRIS, Supt.

CHARLES PURCELL, Mine Boss.

RIVERSIDE COAL COMPANY.

No. 143.

RIVERSIDE MINE.

This mine was found to be in fairly good condition for air and drainage. The roadways were generally good; mine doors needed some repair. The roadways were quite dry in some sections, and are being sprinkled occasionally. The superintendent was requested to extend the sprinkling over other dry roadways within the mine. Break-throughs between rooms were not being driven as regularly as they should be. The system of operation is to turn two rooms and then break them together at about fifty feet from the entry, and then drive them as a double room with roadway on each side, throwing all the waste in the center of the double room. It was suggested that break-throughs be driven through the room pillars about 150 to 175 feet from the entry.

CARL SCHOLTZ, Supt.

J. S. MILLER, Mine Boss.

CANNELTON COAL COMPANY.

No. 144.

CANNELTON NO. 1.

This mine has not been in operation during the past year, but the water is being kept out of the mine.

LANGDON LEA, Supt.

CANNELTON COAL COMPANY.

No. 150.

CANNELTON NO. 2.

The condition of this mine has been much improved upon during the past year. The break-throughs between rooms are being driven more regularly than they formerly were. However, the mine doors were not all self-closing. An electric haulage plant has been installed in the 4th section of the mine, and hauls about three-fourths of a mile distant to the tipple. A number of tenement houses were also constructed during the year. It is the intention to use electric mine machines, two having been purchased—one Jeffrey and one Morgan-Gardner. A small showing of explosive gas has appeared at the head of the 4th west entry.

LANGDON LEA, Supt.

ROBT. TAYLOR, Mine Boss.

C. & O RY.—LENS CREEK.

NEW CHARLMORE COAL COMPANY.

No. 146.

NEW CHARLMORE MINE.

This was formerly the Charlmore Mine, operated by the Hickory-Jackson Coal Company, successor to the Charlmore Coal Company.

The roadways and mine doors were in fairly good condition. It was requested that a second opening be driven and the mine mapped as soon as possible, all of which the superintendent promised to have done at once.

OKEY MEADOWS,

EDW. JACKSON, Mine Boss.

FRED CONNEL, Supts.

MARMET COMPANY.

No. 147.

MARMET NO. 1 MINE.

This mine was formerly known as the Brabbin Mine. The roadways and mine doors were found in good condition. The roof in some parts of the mine is quite dangerous, as there is a draw slate, which runs from 3 inches to 5 inches in thickness, that is quite dangerous, and some of the miners try to keep it up. The inspector advised that this draw slate be taken down. The break-throughs between rooms were noticed during the year to be somewhat neglected.

L. W. ATKINSON, Supt.

J. W. NOBLE,

JOS. POWERS, Mine Bosses.

MARMET COMPANY.

No. 148.

MARMET NO. 2 MINE.

This was formerly the Lens Creek Mine.

The roadways and mine doors are in good condition. The roof is quite good, and the draw slate is taken down. Break-throughs between rooms are sometimes neglected, and the inspector requested that they be driven with more regularity, which Mr. Atkinson, the superintendent, promised to have done.

L. W. ATKINSON, Supt.

J. W. NOBLE,

JOS. POWERS, Mine Bosses.

MARMET COMPANY.

No. 149.

B DRIFT.

This is a new opening, which will be driven to connect with the No. 1 and No. 2 mines. The headings were driven about 800 feet at the time they were inspected (December 14th, 1900). Rooms are turned off both these entries. The roadways, mine doors, ventilation, drainage, ventilation of working places were good; distribution of air fair.

L. W. ATKINSON, Supt.

J. W. NOBLE,

JOS. POWERS, Mine Bosses.

*C. & O.—WINIFREDE BRANCH.**WINIFREDE COAL COMPANY.*

No. 150.

ARBUCKLE MINE.

On September 28th this mine was inspected, and again on December 17th. On the former inspection the mine was found not in as good condition as on the previous inspection, the furnace stack burned during the interval. The stumps of pillars that had been left to support the roof have been drawn out in some places, and very little timber is set to give warning of approaching danger. On the right side of what is known as the "Main Entry" the rock was found broken in two places and the pillars of coal being drawn and no timber being set. The inspector requested that the right side of the entry be abandoned at once, and that timber be set in the left side whenever the coal is to be taken out of that side. The coal in this mine is about 3 feet thick, with a sandstone roof. The mine boss, Mr. Cooper, agreed to follow the instructions given.

R. B. CASSADY, Supt.

GEORGE COOPER, Mine Boss.

WINIFREDE COAL COMPANY.

No. 151.

SOUTH MINE.

During the fore part of the year the break-throughs in this mine were not driven with much regularity, but on the last inspection made (December 19, 1900,) there was much improvement in this direction. The roadways were found generally good, and the mine doors in fairly good condition. The stoppings along the rope haulage needed repair, as there was a waste of air through them. The attention of the management was called to these defects, and a promise was made that they would be remedied.

R. B. CASSADY, Supt.

JAS. MORGAN,

THOS. STRATTON, Mine Bosses.

WINIFREDE COAL COMPANY.

No. 152.

NORTH MINE.

The second left entry in this mine is quite dry and dusty, and a request was made that it be kept sprinkled. On the inspection made during September a request was made that the break-throughs between rooms be

driven with more regularity, and it was found on the later inspection made in December that the instructions were being complied with. The roadways, ventilation and drainage of working places, and condition of machinery, good. The distribution of air was fair.

R. B. CASSADY, Supt.

JAS. MORGAN,

W. H. STEWART, Mine Bosses.

WINIFREDE COAL COMPANY.

No. 153.

NORTH MACHINE MINE.

This mine was found in a fairly good condition. A new electric fan was on the ground on the date of the last inspection (December 18th, 1900,) and was to be put in operation within a few days. The mine doors are in good condition, and the roadways are being sprinkled. Break-throughs are driven fairly well, and old brattices are being replaced with new ones, which will improve the ventilation of this mine very much when the new fan is in operation.

R. B. CASSADY, Supt.

JAS. MORGAN,

W. H. STEWART, Mine Bosses.

C. & O.—ACME BRANCH.

COALBURG COLLIERY COMPANY.

No. 154.

RONDA MINE.

The mine doors in this mine were in fair condition. The break-throughs between rooms were being kept driven fairly well. Some rooms, which are being driven to the dip, accumulate considerable water and are the cause of much annoyance to the miners, but the company keeps it hauled out as well as possible. This is the cause of the roadways being wet and muddy—the water spilling out of the water cars. The ventilation and general safety of the mine are good.

J. W. MOORE, Supt.

JAMES P. TURNER, Mine Boss.

STEVENS COAL COMPANY.

No. 155.

ACME MINE.

The roadways are generally good, and mine doors in fair condition. The break-throughs between rooms are being kept driven fairly well. There is a very strong current of air passing into and out of this mine, but the waste of air through old brattices causes the air to be quite close in some sections of the mine. The mine boss promised to have the leakage stopped as soon as possible, as well as to have more timber set in rooms and in some of the entries where it is quite badly needed. The mine doors are self-closing. Where the draw slate is taken down the roof is generally good.

EDW. H. SHONK, Supt.

W. H. MORRIS,

CHAS. T. AWTEY, Mine Bosses.

STEVENS COAL COMPANY.

No. 156.

EMPIRE MINE.

On August 4th, 1900, an inspection was made of this mine. This mine was opened about seven years ago, but work was suspended before the tippie was completed. Operations were resumed about July, 1900. Six entries are being driven preparatory to increasing the output. The roof is quite dangerous, as there are about six inches of draw slate which they are trying to keep up. The inspector has requested Mr. Shonk to have this draw slate taken down as fast as the entries are advanced, which he has promised to have done. There is no second opening at this mine other than the shaft which was sunk for a furnace, and it will require the driving of about 400 feet of entry to get through to a point in the hill before a permanent opening is secured, at the entrance of which a fan will be placed.

EDW. H. SHONK, Supt.

M. CRAWFORD,
W. H. MORRIS, Mine Bosses.*STEVENS COAL COMPANY.*

No. 157.

KEYSTONE MINE.

On October 5th, 1900, and March 12, 1901, this mine was inspected. On the former inspection the mine was found in fairly good condition. Some dust was found in portions of the mine, but it was not considered dangerous. The mine doors were in fairly good condition. The squeeze that came on a portion of this mine about a year ago is checked, after the building of many solid cribs of timber. On the inspection made in March the roadways were generally good and break-throughs between rooms were being driven fairly well, and the general condition of the mine was good.

EDW. H. SHONK, Supt.

J. S. HOLMES, Mine Boss.

PINE GROVE COAL COMPANY.

No. 158.

PINE GROVE MINE.

On March 13th, 1901, this mine was inspected. Operations were begun at this mine about 18 months previous to the inspection, but after a few months operations were suspended. About January, 1901, the above company took charge of the mine and were operating on a small scale, crop coal being about all that was being mined. The seam is known as the "Peerless", and is about 3 feet 4 inches in thickness, with a slate from 1-2 inch to 3 inches thick about 5 inches from the bottom. The mine is not being timbered as it should be, and a request was made that more timber be set. The mine is ventilated by natural causes, and is about 2 1-2 miles from Coalburg.

JOHN PEACOCK, Supt.

WILLIAM CURRY, Mine Boss.

*C. & O. MAIN LINE.**ROBINSON COAL COMPANY.*

No. 159.

KLONDIKE MINE.

The roadways in this mine were found quite wet and muddy in several places, caused by the hauling of water out of the mine in barrels.

Upon inspection made October 4th, 1900, it was requested that a water car be secured and that stop blocks be put in at the head of the incline, all of which Mr. Wooldridge promised to do as soon as possible.

On March 20th, 1901, this mine was again visited, when it was found that the roadways were generally good, but the mine doors were in need of repair. The break-throughs between rooms were being kept driven fairly well, but the stop blocks at the head of the incline were still wanting, and the superintendent was again requested to have the safety blocks placed as soon as possible.

W. L. WOOLDRIDGE, Supt.

JAMES MURRAY, Mine Boss.

ROBINSON COAL COMPANY.

No. 160.

COALBURG NO. 4 MINE.

On October 6, 1900, this mine was inspected, when it was found in better condition than on the previous inspection, but the break-throughs in the mine were being neglected and the management was requested to remedy the matter.

Again on March 20, 1901, an inspection was made of this mine, when it was found that a second opening had not been made in compliance with a request made on a former visit. Work on the second opening had been suspended on account of water. It was again requested that work on the opening be resumed and continued until the second opening was completed, which the mine boss promised to do.

W. L. WOOLDRIDGE, Supt.

JAMES MURRAY, Mine Boss.

*ROBINSON COAL CO.*No. 161 *BLUE HOLE MINE AND COALBURG NO. 3 MINE.*

Operated by the above company, were temporarily suspended during the year.

EAST BANK COAL & COKE CO.

No. 162.

EAST BANK MINE.

On March 22, 1901, this mine was last inspected, when it was found to be in a much better condition than on former inspections. The roadways and mine doors were in a fair condition, the latter needed some repairs. A second opening has been driven since a former inspection and the fan taken from the main opening and placed at the new drift, which has made considerable improvement in the air, but it was found that the air was quite close at the head of some of the entries, which was due to a large

waste of air through old stoppings. The superintendent was instructed to have all the break-throughs closed and made as tight as possible and to get the air in circulation around the face of the workings.

P. L. BRANNON, Supt. and Mine Boss.

KANAWHA COAL MINING CO.

No. 163. *BLACK CAT MINE (LEWISTON SEAM).*

This mine was regularly inspected on three different times during the year, and on each time it was found that the ventilation of the mine was not up to the requirements. The break-throughs are not made with much regularity and stoppings were neglected. Drainage and roads were in bad condition. The timbering in the mine was not promptly done, which to some extent was the fault of the miners. The superintendency of the mine changed during the year and there is promise of the above conditions being remedied.

PETER GALLAGHER, Supt.

J. F. GALLAGHER, Mine Boss.

KANAWHA COAL MINING CO.

No. 164. *BLACK CAT MINE (COALBURG SEAM.)*

This mine was regularly inspected during the year, and at no time was it found in a perfect condition. The mine is ventilated by means of a fan, which is ample, but the air courses are practically filled with slate, so as to prevent the air from circulating. The roads were covered with water in places to such depth as to make them impassable. Rooms have been turned off 150 feet in advance of the air current. The attention of the superintendent was called to the above defects and a promise was made that the conditions would be improved at once. The superintendency of this mine changed during the year. The superintendent formerly being C. A. Jewell.

PETER GALLAGHER, Supt.

J. A. GALLAGHER, Mine Boss.

BELMONT COAL CO.

No. 165. *LEWISTON SEAM.*

This mine is ventilated by natural means, which give very poor results. The break-throughs between rooms are neglected in this mine. The roof in some parts of the mine is quite bad, but the roof in the greater portion of the mine is fairly good. Mine doors were in need of repairs. Promises were made by the mine boss to remedy the defects named. During the month of June a new opening was being constructed and it was the intention to install a fan when it was completed. Some loose slate on the main heading was ordered to be taken down.

T. E. EMBLETON, Supt.

P. H. EMBLETON, Mine Boss.

BELMONT COAL CO.

No. 166. *COALBURG SEAM.*

This mine is ventilated by means of a fan, which is sufficient in its ca-

capacity for all persons employed within the mine. The break-throughs between rooms are neglected to some extent and the doors are not self-closing. Some doors were found which needed repairs. The roof in the mine is not the best and the miners are quite careless. The mine boss was requested to instruct all miners to keep their places properly timbered.

T E. EMBLETON, Supt.

P. H. EMBLETON, Mine Boss.

CROWN HILL COAL CO.

No. 167.

LEWISTON SEAM.

Work in this mine consists entirely of removing pillars. On October 12, 1900, this mine was visited and it was suggested that new stop blocks be placed at head of incline. On April 3, 1901, this mine was again inspected, when it was found that some of the entry pillars were drawn within 150 feet of the drift mouth and that miners were working over 500 feet inside of the mine, and the roof was practically without any support. Instructions were made that timbers be placed or the mine abandoned, as it was considered very unsafe for the men to work under the circumstances. The work in this mine was under contract, which may account for the condition.

JAMES WALDON, Supt. and Mine Boss.

CROWN HILL COAL CO.

No. 168.

KANAWHA SEAM.

The condition of this mine was found fairly good on the various inspections, but on every inspection it was found that the break-throughs between rooms were neglected and the attention of the mine boss and superintendent was called to this defect. The roof is good when properly timbered.

C. A. JEWELL, Supt.

EDWARD HOPE, Mine Boss.

CROWN HILL COAL CO.

No. 169.

COALBURG SEAM.

The ventilation of this mine is produced by natural causes, which is fairly good. During the year it was necessary to request that stop blocks be placed at the head of the incline. The drainage of the mine is good and the roadways generally good. The mine doors needed some repairs. The roof is good when properly timbered. The coal from this mine is mined by contract.

C. A. JEWELL, Supt.

EDWARD HOPE, Mine Boss.

CHESAPEAKE MINING CO.

No. 170.

HANDLEY NO. 1 MINE.

During the year it was necessary to request that break-throughs be more promptly driven in some parts of this mine and instructions were made to take down some loose slate on No. 4 passway on main straight entry.

A large portion of this mine has been abandoned during the year by reason of the coal being taken out. Roadways are in fairly good condition. The management was requested to furnish the miners timber as promptly as possible when ordered by them.

J. B. LEWIS, Supt.

ALEX THOMPSON,
JAMES MORRIS, Mine Bosses.

CHESAPEAKE MINING CO.

No. 171.

HANDLEY NO. 2 MINE.

No. 3 and No. 4 drifts of this mine were found to have water on the roadways for some distance, which caused considerable complaint. The stoppings along the entries were in need of repairs. Break-throughs in this mine are very much neglected and for that reason the distribution of the air is not what it should be. The roof of this mine needs close attention, and the mine boss was instructed to see that the miners were supplied with plenty of timber.

J. B. LEWIS, Supt.

ALEX THOMPSON, Mine Boss.

MONTGOMERY COAL CO.

No. 172.

UNION or NO. 2 GAS MINE.

On October 15, 1900, this mine was inspected and the following report made: Owing to the Mt. Morris coal being hauled through the main entry of this mine and there being nothing but room pillars and entry stumps to be taken out, this mine has been idle for some time. The drawing of the pillars of this mine was suspended until the Mt. Morris mine was robbed, which was finished about the date of this inspection. It will take several months to remove the pillars from this mine. The entries are very wet and muddy in some places, but the miners are hauled to and from their work.

On March 26, 1901, this mine was again visited, when it was found the mine had been abandoned and the tracks were being taken up in the mine. There is some little coal in this mine that could be taken out, but it would require a great deal of timber to make the mine safe.

S. H. MONTGOMERY, Supt.

WM. TAMPLIN, Mine Boss.

MONTGOMERY COAL CO.

No. 173.

KANAWHA MINE.

Three regular inspections of this mine were made during the year, October, March and June. During the year a new river tippie has been completed and an electrical plant installed for the purpose of operating mine machines and haulage. The ventilation of the mine is not good, since it is ventilated by natural means only. The stoppings in some parts of the mine, as well as the doors, were not in good repair, and break-throughs between rooms are somewhat neglected. The sanitary condition of the mine is not good.

S. H. MONTGOMERY, Supt.

WM. TAMPLIN, Mine Boss.

MONTGOMERY COAL CO.

No. 174.

LEWISTON SEAM.

On October 15, 1900, when an inspection was made, it was found that the ventilation, condition of roof, distribution of air and general safety of the mine were fair; drainage of working places, good; condition of ropes and all machinery, manways and second opening was fair. The crop coal in this mine was mostly worked out several years ago, and at the time of inspection the mine was being put in a condition to resume operation.

On March 26, 1901, this mine was visited, when it was found to be out of operation.

S. H. MONTGOMERY, Supt.

WM. TAMPLIN, Mine Boss.

*MONTGOMERY COAL CO.**MT. MORRIS MINE.*

During the month of October, 1900, this mine was abandoned, it having been worked out.

S. H. MONTGOMERY, Supt.

WM. TAMPLIN, Mine Boss.

SHARPE COAL CO.

No. 175.

SHARPE MINE.

This mine is located on Davis Creek, near Chilton Post Office. The seam of coal is known as the Black Band, and is from 30 to 44 inches thick. This mine was inspected on November 24, 1900, when it was found that most of the work consists of room work. There was some water found in different parts of the mine. A shaft had recently been sunk for the purpose of ventilation, but it was not equipped with a stack and gave very poor results. The sanitary condition of the mine was good. The management of the mine was requested to improve the ventilating appliances and furnish map of the mine. The following prices were paid for mining this coal: All under 33 inches in thickness, 65 cents per ton; between 33 and 36 inches, 60 cents; over 3 feet, 55 cents.

FRANK SHARPE, Supt.

H. S. MYERS, Mine Boss.

LEWISTON COAL CO.

No. 176.

LEWISTON MINE.

This is a new mine, located at Lewiston, and at the time of inspection, December 5, 1900, was employing less than ten men. Ventilation of the mine is produced by a furnace. Roof of this mine is not good. It was found that the ventilation, distribution of air, drainage of the working places, condition of ropes and all machinery were good.

W. M. McCONIHAY, Supt.

JAMES COLEMAN, Mine Boss.

SCRANTON SPLINT COAL CO.

No. 177.

SCRANTON MINE.

On April 4, 1901, this mine was visited. This is a new plant, having

been started about January, 1901. The coal which is being mined is Coalburg, and is about 6 1-2 feet in thickness. Five drifts are being driven, two of which have been connected, and at the time of inspection the longest drift was not over 150 feet under the hill. The mine is located on Paint Creek, about 4 1-2 miles from Dego. A large river tippie, substantially constructed, has been erected at Dego, and an electrical plant has been installed at the mine. It is the intention to mine all the coal by machines. The roof of the mine is fair, when the top coal is left up, but the roof appears to be soft slate when the top coal is taken down. A number of miners' houses have been built at this plant.

WM. MUCKLOW, Supt.

MASON COUNTY.

CONDITION OF MINES REPORTED BY JERRY MEADE.

CAMDEN CLAY CO.

No. 178.

CAMDEN NO. 1 MINE.

This mine was regularly inspected during the year and was found as follows: The roadways were in good condition; the general safety of the mine, good, and the ventilation of the mine, fair. Considering the fact that the workings of this mine were confined to the robbing of pillars, the ventilation was all that might be expected under the circumstances. In the course of a few months this mine will be abandoned by reason of the coal being worked out.

M. G. THOMAS, Supt.

J. E. ARMSTRONG, Mine Boss.

HOPE SALT & COAL COMPANY.

No. 179.

HOPE MINE.

This mine was regularly inspected during the year, and on each inspection the condition of the mine was improved over the condition noted on previous inspections. A great deal of work has been done on the roadways, but the air is not as good as it should be. This defect being due to the lack of attention in firing the furnace. Break-throughs between rooms in this mine are driven quite regularly.

D. C. DAVIS, Supt.

HENRY WILLIAMS, Mine Boss.

MASON CITY MINING CO.

No. 180.

McDANIELS MINE.

On August 15, 1900, this mine was inspected, when it was found that the wind coming from certain directions caused the smoke from the furnace to be driven into the mine workings. The company was requested to build a bridge wall in a part of the furnace in order to create a stronger draft.

On November 30, 1900, the mine was again visited, when it was found to have considerable water in it by reason of a flood stage in the Ohio River. The break-throughs in this mine are fairly well up to the working faces.

On June 7, 1901, this mine was inspected, when it was found that the mine was in fair condition, with the exception of the smoke from the furnace being driven into the mine by the wind, to such an extent to necessitate the closing down the mine until the wind changes its course.

GEORGE W. GRESS, Supt.

E. L. HARRIS, Mine Boss.

LIVERPOOL SALT & COAL CO.

No. 181.

LIVERPOOL MINE.

The condition of this mine has been very much improved during the year. On August 15, 1900, the company was requested to make a second opening, which would comply with the mining law and to substitute a fan for the furnace. The doors and stoppings in the mine were observed on November 30, 1900, to be in need of repair and the mine boss promised to make the repairs.

On June 3, 1901, the mine was found to be in a splendid condition.

HORACE SMITH, Supt.

SAMUEL EDWARDS, Mine Boss.

HARTFORD SALT & COAL CO.

No. 182.

HARTFORD MINE.

Considerable improvement has been made at this mine. During the year some 15 tons of new iron rail have been put in the mine and the track very much improved. The system of break-throughs between rooms has been much improved. The chain used for pulling the cars up the slope was observed to be badly worn, and the request was made that a new chain or rope be substituted, which the superintendent promised to do at an early date. The ventilation in the mine is produced by a fan, which gives good results.

D. E. NEWTON, Supt.

RICHARD JENKINS, Mine Boss.

CONSUMERS COAL MINING CO.

No. 183.

NEW CASTLE MINE.

This is the largest producing mine in Mason county and ships coal by rail and river. The ventilation is produced by furnace which gives fairly good results. Some improvement has been made in the ventilation of this mine during the year. The roof in some parts of the mine is quite bad and in others good. The break-throughs between rooms are kept up fairly well. The mine doors are in fair condition. The mine boss was requested on June 6, 1901, to have all loose slate taken down.

MACK ROLLINS, Supt.

JAMES VAN METER, Mine Boss.

THOMAS HARRIS.

No. 184.

HARRIS MINE.

This is a small mine employing less than ten men. On November 28, 1900, an inspection was made of the mine when it was observed that there was no second opening as required by law, and no map had been made

of the mine. Air shaft will shortly be sunk here as the air shaft is about closed. Roadways and mine doors were in fair condition.

THOS. HARRIS, Supt.

FRANK CAVENDER, Mine Boss.

KLONDIKE COAL COMPANY.

No. 185.

KLONDIKE MINE.

The above is a new mine opening on the McDaniel's farm about one mile north of Mason City and has been operated by three miners during the nine months prior to November 30, 1900. Ventilation is produced by natural causes and gives fairly good results. The roadways are also fairly good. Roof throughout the mine is good.

CHARLES PIERCE, Supt and Mine Boss.

J. ICENHOWER.

BEECH GROVE MINE.

On August 13, 1900, this mine was visited when it was found that it had been temporarily abandoned some few weeks previous.

On November 28, 1900, it was again visited when it was learned that since the last date of inspection the mine had been taken in charge by a prospective operator when the water was partly pumped out of the mine, but afterwards allowed to fill up.

PUTNAM COUNTY.

CONDITION OF MINES REPORTED BY JERRY MEADE.

PLYMOUTH COAL & MINING COMPANY.

No. 186.

PLYMOUTH MINE.

During the year this mine changed from the ownership of the Carver Coal Company to the Plymouth Coal & Mining Company. The roadways in this mine are in very good condition. The mine doors are not all self-closing. The roof in one section of the mine is bad and in other parts quite good. This company has made a new opening on the left fork of Poca River, which will in a short time increase the output of the mine considerably. Much work has been done on the roads in this mine during the year and a system of break-throughs between rooms has been started which puts the mine in a very good condition.

WILLIAM CARVER, Supt.

JAMES CARVER, Mine Boss.

MARMET-SMITH COAL & MINING COMPANY.

No. 187.

FLORENCE MINE.

Some improvements have been made in this mine during the year in the way of drainage and road improvement, but there is one entry where pillars and room stumps were being drawn, which frequently caused the roof to break up to the surface which causes a great deal of water to find its way into the mine, making that portion of the mine quite wet and muddy. This company is driving two entries through the mountain, a distance of about 1 1-2 miles to open coal from a new territory.

EDWARD SCHONEBAUM, Supt.

LEWIS TREVILLION,

Mine Boss.

MARMET-SMITH COAL & MINING COMPANY.

No. 188.

POCATALICO MINE.

This mine was inspected on November 27, 1900, when it was found to be in good condition in regard to air and drainage, roadways and mine doors. The roof was quite bad in a portion of the mine but plenty of timber is furnished the miners.

EDWARD SCHONEBAUM, Supt.

JAMES LLOYD, Mine Boss.

CHAPTER XXII.

THIRD INSPECTION DISTRICT.

*Including the counties of*Fayette,
Greenbrier,
Monroe,Nicholas,
Pocahontas,
Raleigh,Summers,
Webster.

MONTGOMERY, W. VA., June 30, 1901.

HON. JAMES W. PAUL,

Chief Mine Inspector,

Charleston, W. Va.

Sir:—

In accordance with section 3 of the Mining Laws of this State, I have the honor to submit herewith, my fourth annual report, as Inspector of Mines in the Third District, for the year ending June 30, 1901.

It gives me pleasure to state that apart from a few exceptions, the mines in this third district are all in a reasonably good condition as regards ventilation and other matters pertaining to the health and safety of the workmen employed therein, so far as the observance and compliance with the Mining Laws as enacted by the Legislature of 1901 and which came into force on the 5th day of May last. In regard to the use of injurious oils; constant operation of fans at mines generating fire damp; storage of powder; stretchers; special rules, etc., as yet, I have not had sufficient time to make personal investigation, except at a portion of the mines at which I found the managers using every effort to comply with the changes required and especially so in regard to the use of oils, running of fans and the driving of break-throughs. In regard to the powder question, until the decision of the Attorney-General, there was a division of opinion in regard to its application, which I think will now have no further opposition and will be strictly observed.

During the year I have made to the various mines two hundred and fifty inspection visits and thirty-two visits for the purpose of examination of the places and making investigation in regard to the manner in which thirty-two fatal accidents, which were promptly attended, occurred during the year, and were written up and forwarded to your office.

Although the accidents have already been reported, I deem it advisable

to briefly review them, the causes by which they were brought about in the different sections of the district in which they occurred, why in one section more accidents occur than in another, the number of white and colored respectively who lost their lives.

Commencing at Morris Creek, which is the western boundary of the third district, and following the C. & O. and K. & M. Railroads to Gauley Junction, a distance of about 13 miles, in what is generally known as the Kanawha Gas Coal District. We find on the C. & O. 25 mines at which about 1612 persons are employed, we also find on the K. & M., 9 mines at which 750 persons are employed, making a total in the Kanawha section of the district of 2362 men, and 250 mules employed, 11 electric plants, 13 electric motors, 2 tail-ropes haulages, 1 compressed air locomotive, together with 3 compressed air plants, 24 electric and 21 compressed air mining machines and all other machinery requisite and in operation during working hours.

In this section, 4 fatal accidents occurred in the following manner: one (white) miner by fall of slate at face of working place; (white) driver by car jumping track and knocking out timber causing fall of slate; 2 (colored) miners by cars becoming uncoupled on incline plane. As stated 4 fatal accidents occurred, 2362 men are employed, making a little over 590 men employed for each accident in this particular section.

Commencing at Gauley Junction which is the western end of the New River field and following the main line of the C. & O. to Quinimont on the north side of New River, a distance of 35 miles, including Gauley Mountain, Keeney's Creek, Cliff Top and Laurel Creek, we find 31 mines at which 3074 men and 300 mules are employed, 14 rope haulages, 9 steam locomotives, 3 electric plants, one compressed air plant, 6 electric and 10 compressed air mining machines and all other necessary machinery constantly in operation when the mines are at work. In this section 11 fatal accidents occurred; 5 (white) miners and 2 (colored) miners were killed by falls of slate at face of working places; 2 (white) drivers and 1 (colored) driver were killed by falling off cars on steep grades; 1 (white) trapper boy by attempting to get onto a moving train of cars. As stated 11 fatal accidents occurred, 3074 men are employed, making 279 men employed for each accident in this particular section.

Again commencing at Hawk's Nest and following the South Side Branches of the C. & O. on New River, including Big Loup and Piney Creeks, we find between Hawk's Nest and Thurmond, 15 mines at which 1181 men and 114 mules are employed, 5 electric plants, 1 rope haulage, 6 electric motors, 8 compressed air plants, 4 steam locomotives, 4 electric mining machines and at least 50 compressed air mining machines constantly in operation, together with the other vast mechanical appliances when those are being operated. In this section 6 fatal accidents occurred; 2 (white) and 1 (colored) miners were killed by falls of slate at the face of their working places; 1 (white) miner by mine car jamming him against face of his room, having lost control of said car while letting it down into his room; 1 (white) boy bailing water at face of entry, by fall of slate and

one colored man at the tippie by falling off railroad car which ran up on him, making 6 fatal accidents, 1181 men employed or 197 men for every accident of a fatal character on the South Side of New River.

On the Big Loup Creek Branch there are 17 mines at which 2025 men and 285 mules are employed, 9 rope haulages, 4 electric plants, 2 steam locomotives, 2 electric motors, 2 compressed air plants and about 14 mining machines operated by compressed air, together with other machinery and mechanical requirements. In this section 11 fatal accidents occurred; 4 (white) miners and 3 (colored) miners were killed by falls of slate at the face of working places; 1 (white) miner by dropping cars out of his place; 1 (white) driver by car knocking out timber; 1 (white) road man run over by rope haulage trip and 1 (white) carpenter by fall of slate in mouth of new mine drift, making 11 fatal accidents, 2025 men employed or 184 for every fatal accident in the Loup Creek field.

On the Piney Branch of the C. & O. there are 6 operations, 3 shipping coal and 3 not yet ready to ship, at which there are 454 men and 55 mules employed, 1 electric plant, 1 rope haulage and 4 electric mining machines. One white man laboring after the mining machines was killed by being caught by the cutter belt and dragged under the cut.

Where most of the non-fatal accidents occurred were at the face of working places through indifference.

By reference to the above statements it will be seen that 14 white and 6 colored miners lost their lives at the face of their working places, through fall of slate and top coal and at a point where their lives and their own safety depended on their own actions and their own judgment. I do not hesitate to say that the investigations made in regard to those accidents proved that nearly every one of them were old and experienced miners and of mature age. Investigations also proved that the 5 drivers, water bailer, trapper, together with the three men killed on the planes and those at the tippie were accidental and unavoidable under the circumstances by which they were brought about. Riding up and down those incline planes is strictly prohibited by almost all companies, yet miners and other workmen get on and ride at their own risk. Drivers rather than use sprags on steep grades, in many instances, when they have been ordered to do so, drive without using them. In this manner many accidents are brought about which could be avoided if the instructions given were properly observed.

It is plain that for a reduction in accidents in a general way the workmen themselves will have to exercise more care and take fewer risks than they do at present, and those under whom they are employed will have to enforce more rigidly the rules and orders issued by them for the government of their several mining operations. I especially desire to state that on many occasions during my rounds in the past year and in previous years I have compelled miners to stop work and pull down slate and top coal, of a very dangerous nature in the New River regions, under which I found them working. The excuse made was always the same, namely; after accomplishing a certain piece of work they intend to do what they, in reality, ought to do before ever they started to work.

In this manner the majority of all those accidents fatal and non-fatal, which occur at the face of the working places are brought about. In some instances accidents are brought about by workmen trying to save a small amount of dead work which would be caused by pulling down the loose slate and making the place, in many instances absolutely safe.

It may be very readily asked, why so many more accidents occur in one section of the district than occur in other sections and again how so many more accidents occur in one mine than in another where miners are closely contiguous to each other and working in the same seam. Under circumstances of this description I feel it my duty to explain to all who are interested, why and in what way this is brought about. Principally this is caused to a great extent by the differences which exist at the different points, in the nature of slate formations, which over-lay the seam and form the roof of the various working places in the different mines. The coal seams as a general rule which are operated, all along the main line of the C. & O. R. R. and in the Kanawha and New River Valleys, are principally overlaid by heavy slate formations of a regular character, except however, at local points where the sandrock overlaying the slate on some occasions cuts the slate out and becomes the roofing of the seam.

In almost all mines operated in what is known as the Kanawha measures, the roofing slates, as a general rule, are, exceptionally regular, strong, of a tenacious character and in many instances the working places almost absolutely safe, hence few accidents occur.

The roofing slates in a majority of all the mines along the line of the New river and its northern tributaries, with few exceptions, are of a different character than those of the Kanawha River, although heavy, they are generally of much softer nature, have fewer regular bedding planes and are much more intersected by joints, having no regular bearing, but running in almost every direction. This class of slate, as a general rule, is not very dangerous while the miners are working under it. It becomes more dangerous after having been exposed for some time and subject to the action of the ventilating currents and the moisture they contain. This is demonstrated, more or less, in almost every mine along the line of the New River, and especially so on the entries in some sections, as when the mining is done the roof will appear to be hard and sound. In a few days small chips of slate will fall and it will be by close attention observed that the irregular joints have commenced to open or better known in mining parlance cutting has commenced.

This process will keep slowly following up on some entries and as a general thing at a good distance behind the miner.

In some sections of the Loup Creek field and particularly so on the eastern side of the Creek where the workings are all going to the rise and approaching the surface at every point and where the covering over the seam is extremely light and much intersected by Branch Creeks also where the formations overlaying the coal seams and forming the roof are of an alternating character, sometimes soft sandstone and others slate, it becomes very unreliable, a great source of danger and where those conditions exist the greatest proportion of our accidents occur.

It is no uncommon thing in the Dunn Loop, Turkey Knob, Macdonald and Collins No. 1 mines to find sandrock forming the roof on one side of a room and slate three feet in thickness on the other side. In many instances, rock roof will be found on both sides of the room and a patch of slate in the middle. Those irregular slate formations also contain what is known as kettle bottoms of all shapes and sizes, which drop out unexpectedly and without giving the least warning, as soon as the coal seam is mined away from under them. If the mining was done on the floor instead of being done in the top of the seam next to the roof, which is the rule in this field, there is no doubt but fewer accidents would occur where the described conditions exist.

This system of mining on the floor, however, would be hard to establish among pick miners from the fact that the coal seam is much softer near the roof than it is near the floor and when mined next the roof the powder used for blasting can be placed in the most solid part of the seam and gives the best results.

During the past year the coal business has been fairly brisk in this third district, except at short intervals, brought about principally by storms and other unavoidable causes, thereby causing delay to the transportation of the product, and all miners and other employes around the mines have had practically speaking, all the employment they were reasonably able to perform.

The coke trade, however, has not been as active this year as in the previous year and especially so towards the latter part of the year. The number of coke ovens is about the same as when my previous annual report was made, a little over three thousand. No new ones having been built during the year, only those being completed which were under construction at the end of the previous year.

Eight new ventilating fans of various sizes have been put in during the past year making 53 now in operation, as against 45 when last reported. Twenty-four mines are ventilated by furnaces and 29 by natural means. Several of those operating by natural ventilation are new mines, recently opened, which have not yet got any permanent arrangements made for their future ventilation, several however, are making arrangements to install fans at an early date. There has been an increase of 8 electric plants, making 25 as against 17 in previous report; 7 rope haulages have been installed making 27 as against 20 in previous report; 5 compressed air plants have been installed, making 16 against 11 in previous report.

There are now in operation in this third district 40 electric and 95 compressed air mining machines. In regard to mining by machinery, I desire to call your attention to the fact that a new style of mining has been introduced in some sections of the New River field recently, which in some respects is of considerable advantage over the usual methods. The Jeffrey Manufacturing Co. has built some machines with the chain belt on an angular frame, which commences to cut about 12 inches from the top of the seam and runs up to the roof. When the cut is completed by this method, if any parting exists between the seam and the roof this piece of top coal usually drops down or is very easily removed thereby producing a cut in about the same condition as if a pick miner had made the cut,

making it much easier to blast and leaving no coal on the floor as is usually the case when mined at the lower part of the seam, which in some cases where the floor and the seam adhere together is very tiresome to dig up and leaves a very undesirable floor to shovel on. In addition to the above quoted machinery there are 14 steam locomotives varying from seven to twelve tons and one pneumatic locomotive in use for haulage purposes. The steam locomotives being used exclusively outside between the drum and the various mine openings.

It is worthy of note that steam and electric power are used almost exclusively for hauling purposes in this district, there being only one compressed air haulage in the field which has been operated for several years in the Vulcan mine at Powellton, which has no doubt given fairly good results, but for some reason does not seem to be appreciated by any other management in the field.

Sixteen new mines have been opened during the year, several of which have commenced to ship coal and some that have not completed their improvements sufficiently to do so. This makes the total number of operations in this third district now 106 as against 90 in my previous report. Several other Companies are already organized and are making preparations to open up at once. Two Companies are preparing ground on Smithers Creek, the Oakwood Colliery and Collins Colliery Co. are at work on White Oak Branch of Big Loup Creek, sinking shafts. The Crab Orchard and Prices Hill Colliery Co. and the McKell C. & C. Co. will each open up a new operation in a short time at the head of Big Loup. One or two new mines will also be opened up immediately on Armstrong Creek. Preliminary surveys of all the above properties have been made and the Companies organized to operate them. All the mines opened during the past year and those now projected for the coming year in this third district are in the soft coal seams, except the Bell Creek Coal Co.'s mine on Gauley River, which is operating the Coalburg Splint seam.

As above stated there are 106 mines in the district, 20 of those mines are reached by steep planes, ranging from 1500 feet to 2700 feet in length. Twenty-five mines by planes, ranging from 1000 feet to 1500 feet; twenty-eight, ranging from 500 to 1000 feet; ten, ranging from 200 feet to 500 feet, five with planes 200 feet; fourteen level with railroad tipples; one slope and four shaft openings.

Those mines are scattered over a territory of something over one thousand square miles and require at least 200 miles of railroad and other travel to reach them.¹

The mine openings at at least two thirds of those mines have been in active operation for periods of time, ranging from ten to twenty years and each contains within its interior haulways, entries, airways, rooms, etc., aggregating from four to seven miles in extent over which the Mine Inspector has to exercise supervision, in addition to making careful examinations of all machinery and mechanical requirements in use, noting if any injurious oils are being used, making special trips in case of fatal accidents, in order to make the necessary inquiries and furnish the special reports as required by law, attend to the keeping up of maps furnished

by all those vast concerns, receiving and answering letters of inquiry, making separate reports for every mine visited, monthly and annual reports.

By a careful review of the above it will be seen no error will be made by using every effort to have the inspection force further increased when the proper time arrives.

By the rapid development of the coal industries through the expansion of old mines and the opening up of new mines it is almost impossible for the mine inspector to perform the requirements which our mining laws require or what our miners and others connected with the mining business, together with the citizens in general expect them to fulfill.

In passing over the field I notice many substantial and costly improvements not mentioned in the above, such as new store houses, several hundred miners' dwelling houses, which are all now being built on an improved and more commodious plan than heretofore, extensions of sidetracks, several new tipples, enlargement and repairing tipples which have been in use for years, putting in new drums of heavier character in order to adopt the monitor system for transportation purposes.

The C. & O. has also double tracked their main line almost the entire distance of the district, completed the South Side Branch from Thurmond to Hawk's Nest, has built a magnificent iron bridge across New River at Prince and completed thirteen miles of new railroad up Piney Creek, thereby opening up another immense coal field in the New River district.

Preliminary surveys have been made already for double tracking the Loup Creek Branch and the extension thereof for a distance of five miles and for 13 miles of new railroad on the South Side of New River between Thurmond and Piney Creek. All those improvements when completed will open large tracts of undeveloped coal lands, such as are now being eagerly looked after and on which many mines will be opened in the near future.

In closing these remarks I especially desire to thank you for all your past assistance through advice or otherwise rendered and solicit a continuance of your help during our joint service for the State. I also return my sincere thanks to all our managers, mine bosses and workmen in general for their considerate treatment, which I have heretofore received at their hands and hope they will as readily assist me in the future as they have in the past to remedy any defects that may exist and assist in preventing any violations of our mining laws, which may in the future be attempted.

Hoping the above remarks may have your approval, I am,

Most respectfully yours,

EDWARD PINKNEY,

Inspector Third District of W. Va.

GENERAL SUMMARY OF THIRD DISTRICT.

COUNTIES.	No. of Openings.	EMPLOYES.							PRODUCTION.	
		Inside.				Outside.			Coal.	Coke.
		Pick Miners.	Machine Miners.	Laborers.	Total.	Laborers.	Coke Men.	Total.	Tons of	Tons of
									2,240 Lbs.	2,000 Lbs.
Fayette.....	100	4,855	599	1,873	7,327	834	878	1,712	5,375,702	442,411
Raleigh.....	6	201	45	99	345	21	21	102,089
Totals.....	106	5,056	644	1,972	7,672	855	878	1,733	5,477,791	442,411
Total men employed inside of mine.....									7,672	
" " " " outside of mine.....									1,733	
Grand total of employees.....									9,405	

FAYETTE COUNTY.

CONDITION OF MINES REPORTED BY EDWARD PINKNEY.

KANAWHA & MICHIGAN RAILWAY MAIN LINE.

LONGACRE COLLIERY CO.

Nos. 189 & 190

LONGACRE NOS. 1 AND 2 MINES.

This operation is located at Longacre on the Great Kanawha river, and on line of K. & M. Ry. No. 1 Mine is 140 ft. above railroad and 780 ft. above sea level. No. 2 Mine is 110 ft. above No. 1. The coal worked in No. 1 Mine varies in thickness from 3 ft. 8 in. to 4 ft. 8 in., which includes slate bands and other impurities, amounting to at least 8 in. in thickness and occupying three different positions in the coal. The developments in this mine are conducted on the double entry system. The entries being 60 ft. apart from center to center, rooms are turned 30 ft. to 60 ft. apart, one room being worked single and other double, 34 ft. and 40 ft. wide respectively. The roof of the mine is a slate which in some sections is fairly good while in other sections there is a soft slate 16 in. to 20 in. in thickness with small coal seams which makes a dangerous roof and hard to hold. The advance workings in this mine are going slightly to the dip. Ventilation of this mine is produced by natural means. On the date of last inspection natural ventilation and drainage only moderate, but the other conditions were found satisfactory. The No. 2 Mine operates a seam which varies in thickness from 4 ft. 6 in. to 5 ft. 6 in. in which there is very small per cent. of impurities, which consist of thin bands of sulphur, near the roof. This mine is developed on the double entry system. The rooms being turned every 60 ft. and made 30 ft. wide. Ventilation of the mine is produced by a 7 ft. exhaust fan, which is not adequate for the requirements of the mine except when the conditions are most favorable. All other conditions of the mine were found to be up to the requirements. The mining in these mines is done principally by compressed air machines. The plant is well equipped with air compressors, steam en-

gines and boilers, in short, the entire equipment of this mine is commodious, substantial and up to date in all respects.

FRED DIXON, Supt.

ED. LITTLEJOHN, Mine Boss, Mine No. 1.

RAYMOND HURD, Mine Boss, Mine No. 2.

W. R. JOHNSON & CO.

No. 191.

HAREWOOD NO. 2 GAS MINE.

This mine is situated on the north side of the Gt. Kanawha River and on the main line of the K. & M. R. R., about 29 miles east of Charleston. The No. 2 Gas seam is worked which at this point is 290 ft. above railroad and 940 feet above sea level. The coal varies in thickness from 5 feet to 5 feet 6 inches and has a sound slate roof, and the coal has very little impurity in it. The developments are conducted on the double entry system. The main advance workings go to the dip. The main entry pillars are 60 feet and those between cross-entries, 40 feet. Rooms are turned every 70 feet and are worked 30 feet wide. The product is hauled by mules and is run down the incline, one car per trip with a 3-4 in. rope. The tiple arrangements, complete and of a substantial character. On the last inspection the mine was found to be in good condition in regard to ventilation, doors, stoppings, air-ways, etc.

JAMES LOVELL, Supt.

JOHN AKERS, Mine Boss.

BOOMER COAL & COKE COMPANY.

No. 193.

BOOMER MINE.

This operation is situated on Boomer's Branch, a tributary of the Gt. Kanawha River on the line of the K. & M. R. R., about 29 miles east of Charleston. The coal worked is the Coal valley or No. 2 Gas, which is 430 feet above the railroad and is reached by an incline 2800 feet long. The coal in this mine averages 5 to 6 feet in thickness. In some sections a slate band from 1 to 1-2 in. is found near the middle of the seam. The developments are conducted on the double entry system. The ventilation of the mine is produced by a 10 ft. blower fan operated by electricity and is good all over the entire mine. The greater portion of the coal produced is mined by the Jeffrey electrical mining machines, and is hauled a distance of 2000 feet by an 8 ton electrical motor. The general safety of all haulways and working places found in a very satisfactory condition. This mine may be termed a dry mine in every section except those places near the outcrop. The mine is going to the rise, hence all water made at the outcrop runs to the drift mouth. All mechanical devices were found in a safe condition. The product of this mine is shipped exclusively by rail.

C. C. SHARPE, Supt.

E. LITTLEJOHN, Mine Boss.

FALLS COLLIERY COMPANY.

No. 194.

GLEN FERRIS MINE.

This operation made its first shipment of coal on December 10, 1900. It is located on the K. & M. R. R. about 33 miles east of Charleston near

the Kanawha Falls. The tippie arrangements for handling the coal are very substantial and up to date. The coal which is being mined is known as the Coal Valley or No. 2 Gas and at this point is 592 feet above railroad. The coal is 4 feet 6 inches in thickness and appears to be entirely free from sulphur and other impurities which are occasionally found in this coal at other points. In some sections of the coal field this bed has from 10 inches to 15 inches of hard splint coal in the upper part of the bed, but in this mine, at that horizon, the splint coal is absent and the coal resembles in structure the Pittsburg seam. It is hard and bright and comes down in blocks. The coal is let down the incline, a distance of 1150 feet, in cars of 1 1-2 tons capacity by a 1 inch steel rope which winds on to a drum 6 feet 8 inches in diameter. Two cars constitute a trip. The openings in this mine are about 2500 feet from the head of the incline. The mine is developed on the double entry system. There are two separate openings, each having a small furnace and stack for ventilating purposes. The output of the mine at time of inspection was about 100 tons per day.

J. PRITCHARD, Supt.

J. W. STRAUGHAN, Mine Boss.

C. & O. R. R., MORRIS CREEK BRANCH.

EUREKA COAL COMPANY.

No. 195.

EUREKA NO. 5 MINE.

This mine is located on Morris Creek, on a Branch of the C. & O. R. R., about 2 miles from Montgomery and 27 miles east of Charleston. The No. 5 splint block coal is worked, which at this point is 625 feet above the railroad and 1,500 feet above sea level. The mine openings are reached by an incline 1,730 feet in length, equipped with a 14 foot drum and 1 1-8 steel ropes. Three mine cars are run down the plane each trip, the capacity of each car being about 2 tons. The coal varies in thickness from 5 feet 6 inches to 6 feet 8 inches and in general has a good slate roof. The advance workings are about 3,500 to 4,000 feet distant from the drift mouth. The mining is principally done by electric machines, but the haulage is done by mules. The ventilation is produced by natural means. There are several openings on each side of the mountain, through which air for ventilation is taken. This mine was connected with the Mecca Mine Ventilation of the mine is fairly good at all points. On the date of the last inspection the general condition of all haulways, working places, drainage, mechanical equipments in use, in a good and safe condition.

GEO. FRASIER, Supt.

ROBERT THOMPSON, Mine Boss.

EUREKA COAL COMPANY.

No. 196.

EUREKA NO. 2 GAS MINE.

This mine is located below the No. 5 seam and is on a level with the railroad and having an elevation of 660 feet above sea level. The coal is hoisted by a steam hoist and dumped onto the screens automatically. The distance from the drift mouth to the advance workings measures

from 3,000 to 4,000 feet. The coal has an average thickness of about 5 feet, which includes a band of slate in the center of the seam, varying in thickness from 2 1-2 to 5 inches. The product of the mine is hauled a distance of 2,500 feet by an electric motor in trips of 12 to 16 cars, each car having a capacity of 1 1-2 tons. The developments are conducted on the double entry system principally. The entries are 50 feet from center to center, and rooms are turned every 50 feet and worked about 28 feet wide. In some sections of the mine the grades are such as to permit the rooms to be turned on both sides of the entries. The roof is generally good and is composed of a loose slate formation of considerable thickness. The ventilation is produced by a 16 foot force fan, which gives fairly good results when properly attended. On the date of the last inspection the ventilation arrangements were in an unsatisfactory condition. At the head of every entry and particularly the main straight entries, doors and brattices were required. The superintendent was requested to remedy these defects and assurance was given that the matter would be given early attention. All other conditions of the mine were found in good repair and apparently safe in every detail.

IRA DAVIS, Supt.

JOHN FRASIER,

JOHN FARRELL, Mine Bosses.

CARVER BROTHERS.

No. 197.

MECCA NO. 2 GAS MINE.

This mine is located on the Morris Creek Branch of the C. & O. R. R., 2 miles south of Montgomery. The Coal Valley or No. 2 gas seam is worked, which at this mine is about 45 feet above railroad and 645 feet above sea level, and varies in thickness from 4 feet 4 inches to 5 feet 4 inches, and contains a very small percentage of impurities. The mine has a good slate roof. The tippie is built across Scarlet Branch, there being openings on each side of the branch. The mine is developed on the double entry system. The entries being 45 feet between centers. The rooms turned every 60 feet and worked 30 feet wide. From the drift mouth to the face of the advance entries is a distance varying from 6,000 to 6,800 feet. The product is hauled from two main gathering stations for a distance of 5,000 feet by a 12 ton Morgan-Gardner electric motor, which hauls about 24 mine cars each trip, having a capacity of 1 1-4 tons each. The power plant is located near the tippie, and has two boilers and a 150 H. P. engine. The ventilation is produced by a 14 foot force fan of the straight blade type and gives fairly good results. When last inspected the ventilation of this mine was good, with the exception of the Allen entry. The reason for this defect was due to the caving in of a break-through, but another was in process of completion. Drainage found to be fairly good at all points. All mechanical appliances found in a good condition.

JOHN CARVER, Supt.

JOHN TASKER, Mine Boss.

CARVER BROTHERS.

No. 198.

MECCA NO. 5 SPLINT MINE.

This mine is located on Morris Creek Branch of the C. & O. R. R., two miles south of Montgomery, and is 650 feet above railroad and 1,505 feet above sea level. The mine openings are reached by an incline 1,925 feet in length, which is equipped with a 12 foot drum and 1 1-4 inch ropes. Two mine cars are run down the incline each trip, each car having a capacity of two tons. The seam varies in thickness from 5 feet to 7 feet, and includes one small band of bone coal and slate, ranging from 1 to 6 inches in thickness. The distance from the drift mouth to the face of the advance entries is from 2,000 to 2,500 feet. The mine is worked on the double entry system, entries being 40 feet apart and the rooms turned every 60 feet and driven 28 to 38 feet wide. The ventilation is natural. When last inspected the ventilation was fairly good. The coal at many points is very near the summit of the mountain, and several openings have been made for ventilation. This mine and the Eureka No. 5 Mine are broken into each other. The drainage in some parts of the mine is very good, while in others only moderate. The mine is more wet during the rainy seasons, for the reason all water finding its way through the roof and crevices. The condition of all haulways was found fairly satisfactory at all points and all mechanical equipments were apparently safe in every detail.

JOHN CARVER, Supt.

JOHN TASKER, Mine Boss.

*CHESAPEAKE AND OHIO RAILROAD MAIN LINE.**COAL VALLEY MINING COMPANY.*

No. 199.

COAL VALLEY MINE.

On the date of last inspection of this mine it was found that the ventilation, general condition of all departments, including mechanical appliances, drainage, safety on haulways, doors, stoppings, etc., were in a very good condition and apparently safe in every detail.

J. W. STRAUGHAN, Supt.

W. R. JOHNSON.

Nos. 200, 201 & 202. *CRESCENT MINES NOS. 1, 2, AND 5*

These mines are situated on the Great Kanawha River and on the main line of the C. & O. R. R., 1-2 mile east of Montgomery. Three separate seams are worked at this place, the No. 1 or Eagle; No. 2 or Coal Valley (No. 2 Gas) and No. 5 or Splint block. No. 1 Mine is 45 feet above railroad and 685 feet above sea level. No. 2 is 110 feet above No. 1. No. 5 is 650 feet above No. 2 and it is 1,445 feet above sea level. The No. 1 is on a level with tippie. No. 2 Mine is reached by an incline 325 feet in length, equipped with a 6 foot drum and 3-4 inch ropes, one mine car con-

stitutes a trip on this incline. The No. 5 is reached by an incline 1,750 feet in length, having a 12 foot drum and 1 1-4 inch ropes, three mine cars of two tons capacity constitute a trip on this incline. The product of the three mines is handled over the same tippie. The coal station for the railroad engines is located at this tippie. A crusher is used for breaking the coal for coking purposes. The No. 1 seam varies in thickness from 2 feet 3 inches to 3 feet 8 inches, including a slate band and other impurities about 4 inches in thickness. In Mine No. 1 the mining is done by compressed air machines of the Sullivan and Harrison type. Rooms in this mine are turned 70 to 100 feet apart, when turned 70 feet apart the rooms are made 24 to 26 feet wide, and when turned 100 feet apart the rooms are made 40 to 45 feet, with a track on each side. The ventilation in this mine is produced by a 10 foot force fan, which gives satisfaction. The No. 2 seam has a thickness of 5 feet. All of the working in this mine consists in robbing pillars and stumps. Considerable difficulty is had in maintaining good ventilation and drainage on account of the heavy squeezes which are constantly in operation, and from the fact that the old workings give off a large quantity of black damp. The company exercises all possible care, and when difficulties arise the men are withdrawn from the mine. At the time of the last inspection of this mine the ventilation was reasonably good in some sections and only moderate in others. The roadways were found to be in reasonably good condition and well timbered. The No. 5 openings, which are being operated, are about one mile from the drum house. The coal being hauled from the openings to the drum house by an 8 ton steam locomotive, which hauls 18 to 20 cars per trip. This seam averages in thickness over 6 feet, and has one small band of nigger-head 2 inches thick and one band of slate near the top of the seam, varying from 4 to 6 inches. The roof is principally slate, and in some sections it is fairly good and reliable, while in others it is very loose and dangerous. The principal working of this mine consists of robbing pillars and stumps. The ventilation is natural, and when last inspected was found to be good throughout the mine. The drainage of the mine is only moderate and roadways are very muddy and sloppy. This is due to the water coming in through the surface breaks. Condition of haulways and working places in regard to timbering and taking care of loose material and side obstructions was found in safe and satisfactory condition, as was also all mechanical equipments.

THOS. A. BARTLAM, Supt. JAMES GILES, Mine Boss No. 2 Mine.
LOU WATERS, Mine Boss No. 1 Mine.
JOHN H. KIRBY, Mine Boss No. 5 Mine.

CARVER BROTHERS.

No. 203.

EDGEWATER NO. 1 MINE.

This mine is situated on the Great Kanawha River, on the main line of the C. & O. R. R., 28 miles east of Charleston. The coal is known as the Eagle No. 1 Gas coal or Wyant, and is at this mine about 100 feet above

level of the railroad, being reached by an incline 175 feet in length. The thickness of the coal averages about 4 feet, including one small band of slate 2 inches thick, near the top of the seam. The roof is a strong slate of a brownish or blue color, in some parts of the mine there is from 4 to 6 inches of draw slate between the main top and top of the coal seam, which is usually taken down by the miner. The mine is developed on the double entry system. The ventilation is produced by a 15 ft. force fan, which gives very good results. The condition of the haulways in regard to general safety was found satisfactory, except at two places on the main haulway leading from the drift mouth to the double parting, where some small pieces of slate were found hanging down from the sides. Although not immediately dangerous, the Mine Boss was requested to take them down. Drainage in some sections is good, but for some distance on the main haulway it is very bad. This bad condition was brought about by the holing into the old workings of the Eagle Mine, where a large quantity of water had accumulated. When last inspected ditches were in progress of construction, and when completed the drainage will be improved. All mechanical devices were found in safe condition.

ENOCH CARVER, Supt.

WALTER CULBERSON,
JOHN E. CARVER, Mine Bosses.

CARVER BROTHERS.

Nos. 204 & 206.

EDGEWATER NOS. 2 and 3 MINES.

These mines are situated on the Great Kanawha River and main line of the C. & O. R. R., 29 miles east of Charleston, and operated in the No. 2 Gas coal. The product is shipped by river and rail. There are two drifts known as No. 2 and No. 3 Mines, each opening has a separate tippie and drum house. The mine cars are run down the incline a distance of 600 feet at the No. 2 Mine and at the No. 3 Mine the coal is dumped into a boiler-shaped monitor having a capacity of 6 tons, in which it is run down the incline. The drums in use at each mine are 8 feet in diameter, and the ropes on No. 2 plane are 1 inch and at the No. 3, 1 1-4 inches. The coal at this mine is 220 feet above railroad and 840 feet above sea level, and averages in thickness from 4 to 4 feet 6 inches. The roof of the mine is a slate of a very solid and reliable nature. The distance from the drift mouth to the face of the advancing entries ranges from 3,000 to 5,000 feet. The coal is hauled by a 10 ton electric motor a distance of 3,500 feet. The power plant supplying the power for the motors, mining machines, electric pumps, etc., is installed between the No. 2 and No. 3 openings and consists of a 250 H. P. engine, a 500 volt dynamo and battery of 3 boilers. The ventilation of these mines is produced by 16 foot exhaust fan, which gives fairly good results. The mines are developed on the double entry system. The entries being 50 feet between pillars and rooms turned 50 feet between centers and made 26 feet wide. At the last inspection the ventilation of this mine was fairly good at all points. Drainage, good at all points except one. This one exception was due to the electric pump having been out of repair for a few days. General condition of the roof

was found reasonably good and timbered properly at all points where necessary and the mine was free from loose slate and other obstructions on the haulways. All mechanical appliances were found in safe condition.

ENOCH CARVER, Supt.

JOHN E. CARVER,
JOHN JACKSON, Mine Bosses.

CARVER BROTHERS.

No. 205.

EDGEWATER NO. 5 MINE.

This mine is situated on the main line of the C. & O. R. R., 28 1-2 miles east of Charleston. The No. 5 splint block coal is worked, which at this mine is 809 feet above railroad and 1,450 feet above sea level, and it is reached by an incline 1,742 feet in length. The incline is equipped with a 13 foot drum and steel rope, 1 1-8 inches in diameter, three cars of two ton capacity each constitute a trip on this incline. The product is shipped by river and rail. The seam varies in thickness from 4 feet to 4 feet 8 inches, including two small bands of impurities, one being a slate 4 inches thick and the other a nigger-head band 2 inches thick, both being in the upper part of the seam. The new workings in this mine are conducted on the double entry system. The entries being 60 feet between pillars and rooms turned 60 feet between centers and worked 28 feet wide. The work is going slightly to the dip. There is a good slate roof over all the coal in this mine. A large portion of the work consists of robbing pillars and stumps. The principal opening is located at some distance from the drum house and is reached by a tram-road, which runs through the hill. All of the product is hauled by mules. The ventilation of this mine is natural, and when last inspected was found fairly good at all points. This mine, like others operating this seam, is near the top of the mountain. The coal is found in ridges and mounds, and it is very easy to put an air-way out at any point desired. All haulways and working places found free from loose material overhead or on sides of the roads. The drainage in many places was only moderate, which is due to the water coming in where the pillars are drawn out, which is unavoidable. All mechanical appliances found in safe condition.

ENOCH CARVER, Supt.

JOHN THURMOND, Mine Boss.

CARVER BROTHERS.

No. 208.

EAGLE GAS NO. 1 MINE.

This mine is situated on the south side of the Kanawha River, on the main line of the C. & O. R. R., about 28 miles east of Charleston. The coal mined is known as the Eagle or No. 1 Gas seam. This mine was formerly operated by the late Capt. Wm. Wyant, and is the first mine which was developed in this seam in the Kanawha Valley. The coal at this point is found about 180 feet above railroad, and is reached by a plane 200 feet in length. The coal varies in thickness, from 3 feet 8 inches to 4 feet, which includes about 3 or 4 inches of impurities, consisting of

slate and bone coal near the top of the coal. The product of the mine is hauled by an electric motor for a distance of 5,800 feet. The grades are light, and as many as 40 mine cars can be hauled each trip. Ventilation is produced by a 12 foot force fan, and is reasonably good, considering the distance from the drift mouth to the face of the advance workings, which is at least 1 1-2 miles. Condition of the roof along line of main entry for a long distance is very much broken and has to be heavily timbered in some sections in order to keep it in safe condition. At the places where the work is being developed the roof is principally sandstone and is very good. The water in this mine is pumped out for a distance of 2,500 feet. On the last inspection the pump was broken and considerable water had accumulated in one section of the mine, some places 6 inches to 8 inches deep, but this will be remedied as soon as a new pump would arrive, which had been ordered. In the workings, however, the floor was dry. All other conditions of the mine were in a satisfactory condition, with the exception of refuge holes on main haulway. The miners are hauled in empties to and from work.

ENOCH CARVER, Supt.

WM. KNIGHT, Mine Boss.

THE ST. CLAIR COMPANY.

No. 209.

ST. CLAIR MINE NO. 1 GAS.

This mine is 28 miles east of Charleston, on the south side of the Great Kanawha River and on the C. & O. R. R. The No. 1 seam is 180 feet above railroad and 840 feet above sea level, and is reached by an incline 300 feet in length, equipped with a drum 8 feet in diameter and 3-4 inch ropes, and two mine cars constitute a trip, and also by a pipe line 2 feet in diameter, which is used to convey the coal to the crusher for coking purposes. During the year the inner sections of the workings of this mine were abandoned and development has been made in new territory which had been acquired by the company. This seam averages from 4 feet to 4 feet 6 inches, which includes a band of slate 3 inches about the middle of the seam. The roof in this mine is good. The developments are conducted on the double entry system. Ventilation is produced by a 10 foot force fan. When last inspected the mine was found in satisfactory condition.

A. P. SHEARER, Supt.

THOS. LOYD,

H. SMOOT, Mine Bosses.

THE ST. CLAIR COMPANY.

No. 210.

ST. CLAIR NO. 2 GAS MINE.

This mine is situated immediately over the No. 1 Mine and is 280 feet above the C. & O. R. R. and 940 feet above sea level, and is reached by an incline 638 feet in length and is equipped with an 8 foot drum and 3-4 inch ropes, which handle two mine cars a trip. The thickness of this coal is 4 feet 4 inches to 5 feet, and has a very good slate roof. The developments are conducted on the double entry system, and ventilation produced by a 10 foot force fan. The distance from the drift mouth to face

of the advance workings is about 1,000 feet. The product of the mine is hauled for a distance of about 3,000 feet by an 8 ton electric motor, which hauls 20 to 25 mine cars of 1 ton capacity per trip. The product of this mine is handled over the tippie used by the No. 1 Mine, which tippie has river and rail facilities. Electric plant for the No. 1 and No. 2 Mines is installed at the mouth of the No. 1 Mine. The coal crushing and elevating machinery, steam boilers, etc., are near the tippie and coke ovens. Upon the last inspection this mine was found to be in a very satisfactory condition in regard to ventilation, drainage, and general safety, with the exception of an insufficiency of refuge holes on some sections of the main haulway.

A. P. SHEARER, Supt

JOS. RICHARDSON,

H. SMOOT, Mine Bosses

THE ST. CLAIR COMPANY.

No. 211.

FOREST HILL MINE

During the year this mine passed from the control of M. T. Davis & Co to The St. Clair Co. The mine is on the south side of the Great Kanawha River and on the main line of the C. & O. R. R., 28 1/2 miles east of Charleston. The coal being the No. 2 Gas seam, which at this place is found 285 feet above railroad and 950 feet above sea level, and is reached by an incline 550 feet in length. The incline is equipped with a 6 foot drum and 5/8 inch ropes, one car of 1 ton capacity constitutes a trip. The seam varies in thickness from 1 foot to 5 feet, and contains no impurities of any importance, and has a fairly good slate roof. The mine is developed on the double entry system. The ventilation is produced by a small furnace, which is inadequate, giving very poor results. The territory on which this mine is operated is of limited extent, being of considerable length, but very narrow. The distance from the drift mouth to the face of the advance entries is about 3,000 feet. All of the rooms are turned off the two main entries. On each side of this lease the coal has been robbed out by neighboring mines. The adjoining mines each have force fans, and the result is that much of the black damp generated in the old workings and abandoned parts of these mines finds its way into the Forest Hill Mine and on some occasions gives considerable trouble to the employes of this mine. When last inspected ventilation of this mine found in a very moderate condition, notwithstanding the fact that the doors and stoppings were in a good state of repair. The return airways were carefully examined, as was also the furnace, which is about 4 feet by 4 feet above the grate bars, and was found that the airways were crippled to some extent at several points by falls of slate and also found that the shaft and stack were very shallow and recommendations made that the airways be opened up at once and at least 25 feet more stack be added to the furnace shaft. This the Superintendent agreed to have done at once. Condition of haulways, drainage and other requirements essential to safety of the workings were found good and safe in every detail.

A. P. SHEARER, Supt

GEO. W. RISER, Mine Boss.

J. F. BURDETT.

No. 212.

DIAMOND MINE.

This operation is on the south side of the Great Kanawha River and on main line of the C. & O. R. R., 29 1-2 miles east of Charleston. Product of the mine is shipped by river and rail. Seam worked is the No. 2 Gas and at this mine is 295 feet above railroad, and is reached by an incline 550 feet in length. The seam varies in thickness from 4 to 5 feet, and has about the same impurities as were found in the seam at other mines. The roof is generally good, but in some sections, especially on the main haulway, long distances require very heavy timbering, which constantly needs attention. The mine is being rapidly exhausted. The greater portion of the coal now being produced is taken from pillars and stumps, and unless some additional territory is acquired the output of this mine will be greatly reduced in a short time. Ventilation is produced by a 16 foot force fan, and is very good. The air is forced in at the front of the mountain and escapes at the eastern end of the mine from an opening on Armstrong Creek. Condition of all roadways on which workmen are employed found in safe condition. Drainage good at all points. All mechanical appliances were found in good condition.

J. F. BURDETT, Supt.

JOS. PIRRUNG, Mine Boss.

MT. CARBON COMPANY, LIMITED.

No. 213.

EXCELSIOR MINE.

This mine is operated in a seam of coal about 4 feet thick and known as the No. 1 Gas, and at the point mined is about 60 feet above level of the railroad track. When inspected the ventilation, condition of haulways, drainage and all mechanical appliances were found in a satisfactory condition.

D. T. EVANS, Supt.

JOHN I. ABSALOM, Mine Boss.

MT. CARBON COMPANY, LIMITED.

No. 214.

VULCAN MINE.

This mine is situated at Powellton, 8 miles south of Mt. Carbon, and is reached by the Powellton and Pocahontas Railroad, which road is owned and operated by the Mt. Carbon Co. This road has connection with the C. & O. R. R. at Mt. Carbon and has connection with the K. & M. R. R. by means of a ferry. A river tippie is also a part of the equipment of this road. The coal operated in this mine is known as the Powellton seam, which is soft gas and coking coal, varying in thickness from 4 feet 4 inches to 5 feet, including a small band of slate about middle of the seam. The roof of the mine is principally slate, which in some sections of the mine is fairly good, while in others it is only moderate, especially on some entries where the roof is constantly cutting and falling. This seam is 80 feet above the Excelsior Mine, being 140 feet above the railroad and about 1,390 feet above sea level. It is reached by an incline 350 feet in length. The coal is conveyed down the incline in cars of a single trip,

having a capacity of 2 1-2 long tons. A drum 10 feet in diameter is in use with ropes of 1 inch. The distance from the drift mouth to the face of the various advance entries ranging from 4,000 to 6,000 feet. The product of the mine is hauled from the interior of the mine for a distance of 3,500 feet by a locomotive, operated by compressed air. The usual trip, consisting of from 12 to 20 mine cars. The plant supplying power for this locomotive and other machinery is installed at the foot of the incline, near the tippie. The coke ovens, of which there are 200, coal and coke crushers, elevating machinery, storage bins, machine and repair shops, store, official residences and miners' dwellings are situated at the Town of Powellton, 3 miles from the mines and about 5 miles from Mt. Carbon. The mines are developed on the double entry system, and ventilation is caused by an 8 foot force fan, operated by compressed air, which is installed at or about 3,000 feet from the main intake drift and at or near the center of the area being developed. When last inspected the ventilation, all ventilation arrangements, including doors, stoppings, airways and fan were found in fairly good working order. The condition of all haulways leading to and from working places, where miners or other workmen were employed, were found properly timbered where necessary and free from obstructions and loose material overhead, and apparently safe. The drainage of the mine and all mechanical appliances in use were found in excellent repair and apparently safe under all ordinary circumstances.

D. T. EVANS, Supt.

JOHN I. ABSALOM, Mine Boss.

CHESAPEAKE & OHIO RAILROAD MAIN LINE.

GREAT KANAWHA COLLIERY COMPANY, LIMITED.

No. 215.

DIGBY MINE.

This operation is situated on the south side of the Great Kanawha River on main line of the C. & O. R. R., about 31 miles east of Charleston. The product of this mine is shipped by river and rail. The coal worked is the No. 2 Gas. The workings are connected with the Mt. Carbon Mine, and the ventilation of the two mines is conducted jointly, both mines being operated by the same interests. The coal at this mine is 5 feet 6 inches to 5 feet 10 inches thick, with a slate band about the middle of the seam, varying in thickness from 8 inches to 16 inches. The mine is 540 feet above the C. & O. R. R., and is reached by an incline 1,200 feet in length. In general the roof is slate and very good, however occasionally small areas of loose and unreliable slate are found. A large quantity of the product of this mine is produced by electric machines, the power for which comes from the Mt. Carbon plant. The haulage in this mine is done by mules. The distance from the drift mouth to the face of the advance workings being about 4,500 feet. The grades are principally in favor of the loaded cars. The ventilation in some sections of the mine was only moderate, this being caused by two doors which had been damaged on the west side of the main entry. The attention of the Mine Boss was called to the condition of these doors, and he was requested to repair them at

once, which he agreed to do. Haulways and working places were free from loose material and obstructions and all other causes of a dangerous nature. All other conditions in and about the mine were apparently safe in every detail.

WM. BROWN, Supt.

THOMAS TONEY, Mine Boss.

GREAT KANAWHA COLLIERY COMPANY, LIMITED.

No. 216.

MT. CARBON NO. 5 MINE.

This mine is operated by the above company and is situated on the south side of the Great Kanawha River and on line of the C. & O. R. R. The product of the mine is shipped by river and rail. The seam operated is known as the No. 5 Splint Block, and averages 6 to 7 feet in thickness. This seam is 1,270 feet above level of the C. & O. R. R. The coal from this mine is brought down the incline, 1,800 feet in length, and then is hauled through the No. 2 Gas coal mine, a distance of 7,000 feet, where it is again lowered on the No. 2 Gas mine incline. A greater part of the coal is mined by electric machines. The power for driving machines being supplied by a plant installed at the point of shipment on the C. & O. R. R. The seam is near the top of the mountain, affording many opportunities for ventilation. The ventilation is natural and is good. The formations over this coal are somewhat irregular, the roof being slate and sandstone. The roof is fairly good and reliable, except near the outcrop. The drainage in all sections of the mine is very moderate. The drum on the incline of this mine is 13 feet in diameter and has 1 1-4 inch steel ropes. Three mine cars, having a capacity of 1 1-4 tons each, are run down the incline each trip. All mechanical appliances found in safe condition.

WM. BROWN, Supt.

JOHN HOLMES, Mine Boss.

GREAT KANAWHA COLLIERY COMPANY, LIMITED.

No. 217.

MT. CARBON NO. 2 GAS MINE.

This mine is operated by the above company on the main line of the C. & O. R. R., immediately adjoining the Digby Mine. The seam worked is the No. 2 Gas, the same as is worked in the Digby Mine. The main opening of this mine is 470 feet above level of the railroad and is reached by an incline 900 feet. The coal is about 4 feet 4 inches thick, including a slate band from 4 to 10 inches in thickness. The roof of this mine is a blue slate, which is generally very good and reliable, when properly timbered. The product from this mine is hauled a distance of 6,000 feet from the double parting to the drum-house, an 8 ton electric motor being used which hauls 25 to 30 cars per trip. A large percentage of the coal is mined by Jeffrey electric machines. The mine is developed on the double entry system. The ventilation, which is natural, is fairly good. The intake airway is situated on the west side of the mine and the outlet at the east side of the Digby Mine, the distance between these two points being over 1 1-4 miles, and the difference in elevation is about 190 feet. The condition of the haulways was found free from loose material and ob-

structions and generally safe. Very little water is found in this mine, although it is a little muddy in some parts, but in general there is just sufficient moisture to keep the roads in a very desirable condition. All mechanical appliances in and about this mine were found in a satisfactory condition.

WM. BROWN, Supt.

JOHN HOLMES, Mine Boss.

GAULEY MOUNTAIN COAL COMPANY.

No. 218.

NOVA SCOTIA MINE.

This mine is situated in Fayette county, on Mill Creek, a tributary of the New River, and on a branch line of the C. & O. R. R., leaving the main line at Hawk's Nest and running north a distance of 3 miles to Ansted, where this mine is operated. The seam worked is the No. 2 Gas, and at this point is about 320 feet above railroad. The main openings are reached by a narrow gauge railroad, winding around the mountain for a distance of 1 1-2 miles, thence through a tunnel 3,090 feet long. There are 6 main openings in this mine. The coal varies from 4 feet 4 inches to 6 feet 6 inches, including a band of slate 6 inches thick near the middle of the seam. The roof is slate in some sections and of a very unreliable nature, as it is constantly disintegrating, which requires the entries to be very carefully timbered. The product of the mine is hauled over a narrow gauge railroad by two small locomotives, which haul 20 mine cars per trip, having a capacity of 2 short tons each. A large percentage of the coal is mined by compressed air machines. The mine is developed on the double entry system. As to ventilation, each pair of entries is started from the outside, and is ventilated separately by a fire basket, 2 feet square, which is kept burning at the foot of a 40 foot stack. The current produced being in each case about 4,000 feet. When this inspection was made the ventilation in some of these entries was only moderate. All haulways and working places were found securely timbered. The drainage fairly good and satisfactory. All mechanical appliances in safe condition. During the year a rope haulage has been installed for the purpose of hauling the coal through the tunnel, as the steam from the locomotives damaged the roof of the tunnel to such an extent as to make it difficult to keep in a safe condition.

ROBERT C. CAMM, Supt.

JAMES MARTIN, Mine Boss.

GAULEY MOUNTAIN COAL COMPANY.

No. 219.

RICH CREEK MINE.

This mine is owned and operated by the same company as operates the Nova Scotia Mine and operates in the same seam on the same tract. The opening is about 400 feet above railroad level and is reached by an incline 1,100 feet long. The seam in this mine averages 6 feet, including 2 bands of slate, varying respectively from 2 inches to 6 inches and 2 inches to 8 inches in thickness. The openings where the coal is now being mined are situated about 5,000 feet from the drum-house and are reached by passing through the tunnel 4,000 feet in length. The product is hauled

over this distance by a 12 ton motor, which hauls 12 mine cars per trip of a capacity of 2 tons each. The roof in some sections of this mine is sandstone and is very good, and in other sections, where the roof is slate, it is very bad, much broken and requires much care and attention to keep it safe. All mining done in the 2 main openings of this mine is principally pillar work. The ventilation is natural and is good at all points. The general condition of all haulways and working places was satisfactory. Drainage in both openings in the majority of the entries was only moderate, being wet and muddy. This, however, could not be avoided on account of the surface water coming in by the caving of the roof. The drum used in letting the coal down the incline is 19 feet in diameter and is in 2 sections, with a spur wheel in the center. The rope is 1 inch steel, having a Barney attachment, 2 cars constitute a trip. All mechanical appliances in and about the mine apparently safe.

ROBERT C. CAMM, Supt.

D. DOOLEY, Mine Boss.

COOK & SON.

No. 220.

GAYMONT MINE.

This mine is situated in Fayette county, on the north side of New River, and on the main line of the C. & O. R. R., 16 mile west of Thurmond, and 46 miles east of Charleston. The seam worked is the Sewell seam, and at this point is 295 feet above level of the railroad and 1,127 feet above sea level. It is reached by an incline 800 feet long. The seam varies in thickness from 2 feet 8 inches to 3 feet of clean coal. The product of the mine is hauled on the plane in 2 wooden monitors, having a capacity of 3 1-2 long tons. The drum is 6 feet in diameter and ropes 1 inch. The main drift now in operation is situated about 1-4 mile east of the drum-house. The cars in use having a capacity of a little over 1 gross ton. The distance from the drift mouth to face of the advance entries is 4,000 feet. The roof is principally slate, which forms a fairly good roof when not broken. The floor is taken up to make sufficient height for the mules. The grades are light and regular, but dipping as the workings advance. The mine is developed on the double entry system. The ventilation is produced by a furnace 4 feet by 3 feet 6 inches high, above grate bars, with 6 foot bars. This furnace, however, is inadequate for this mine. When inspected last the ventilation in some sections only moderate, although the doors and airways were in good repair. When inspected last a new opening was being made, and it is the intention of the management to install a fan or build a larger furnace. A letter was addressed the Superintendent of this mine, calling his attention to the deficiency in the ventilation, with the request that it be remedied. General condition of all working places and haulways found in satisfactory condition, except at one point, where a piece of loose slate was hanging, which was ordered taken down and assurances given that it would be done at once. All other conditions of the mine were satisfactory.

THEODORE DEITZ, Supt.

H. B. POLLOCK, Mine Boss.

VICTORIA COAL & COKE COMPANY.

No. 221.

SUNNYSIDE MINE.

This mine is situated in Fayette county, on the north side of New River, on main line of the C. & O. R. R., 15 miles west of Thurmond, and 47 miles east of Charleston. The Sewell seam is worked, which is found 265 feet above railroad and 1,108 feet above sea level. The mine is reached by an incline 700 feet in length. The seam varies in thickness, from 2 feet 8 inches to 3 feet 2 inches, and contains no impurities. The formation immediately overlying the seam is a black slate, and when the floor is taken up to make height for haulage purposes this makes a very good roof, but when broken it becomes dangerous. Distance from the drift mouth to the face of main entries is about 4,000 feet. The advance workings up to this time are all going gradually to the dip, the face of the main entry being now 26 feet below drift mouth. The product is all hauled by mules from the interior of the mine and is run down the incline in wooden monitors, each having a capacity of 3 1-2 gross tons. The drum is 7 feet in diameter and rope 1 inch. The mine cars having a capacity of 1 1-2 tons. The mine is developed on the double entry system. For several years this mine has been seriously troubled with water, partly caused by past mismanagement and partly to the mines on each side occupying a higher level. This particular opening is in a local depression of considerable area and it seems to get all the water from the neighboring mines. Ventilation is produced by a furnace 5 feet by 4 feet 4 inches high, above bars and 8 feet long. When this inspection was made ventilation and all ventilation arrangements were in a fairly satisfactory condition, with the exception of places where the return airway was partly flooded. A new 2 1-2 H. P. gasoline pump was being installed, which it is thought will be able to cope with the water. The haulways in some sections of the mine were quite safe, where the roof is not broken, in other sections where the roof has been broken it has to be closely and regularly attended. The roof in some sections has fallen 4 feet to 6 feet above the coal. When the water is kept pumped the drainage is fairly good. On the date of this inspection it was noticed that one of the ropes on the incline was very considerably worn and attention brought to this. All other arrangements were in satisfactory condition.

J. BLACKBURN,

THOS. BANISTER,

JOHN C. GILMOUR, Supts.

FRED. PATRING, Mine Bosses.

NEW RIVER MINING COMPANY.

No. 222.

ELMO MINE.

This mine is much like the Sunnyside Mine, and has not been a very profitable undertaking. The coal seam has always been small, and the operation has on several occasions suspended on account of financial difficulties. It has to some extent been very unsystematically managed, and much trouble has been experienced of late in keeping the haulways and airways in order. Much difficulty has been had by reason of the squeeze,

which caused the upheaval of the floor and the roof to fall and destroyed many of the stoppings. The company has of late been doing all in its power to make things satisfactory. A fan has been installed, which gives fairly good ventilation. The doors are all canvass and the stoppings are of slate, and in some-instances plank, which were in very good condition. The roof, although much broken in some sections of the mine, was found to be properly timbered and apparently safe. Drainage reasonably good, except for some points where depressions exist in the floor, where small pools of water collect, which have to be removed with water boxes. All mechanical equipments, such as ropes, drum and tippie, although having been in use several years, are in good repair and apparently safe.

T. C. BEURY, Supt.

JAMES GRISSINGER, Mine Boss.

MICHIGAN COAL COMPANY.

No. 223.

MICHIGAN MINE.

Formerly this mine was known as the Masterson, and is situated in Fayette county, about 14 miles west of Thurmond, and 48 miles east of Charleston, on the north side of New River, on the main line of the C. & O. R. R. The coal worked is the Sewell, and at this point is 300 feet above level of the railroad and 1,160 feet above sea level. The mine is reached by an incline 700 feet long. It is developed on the double entry system. The distance from the drift mouth to face of main heading is about 1,000 feet. The thickness of the seam varies from 3 feet to 3 feet 4 inches, and has a sound slate roof. In some sections of the mine there is a thin band of bone coal immediately over the top of the coal. The ventilation of the mine is produced by a brick furnace, which is 5 feet by 3 feet 5 inches over grate bars and having 10 foot bars. The stack and pit being about 30 feet in length. The product of the mine is hauled over the incline by running 2 mine cars per trip, each car having a capacity of 1 1-4 long tons. The drum is 6 feet 10 inches and ropes 7-8 inch in diameter. When this inspection was made the ventilation arrangements were in excellent repair and good working order. The floor is taken up to make room for haulage purposes. The roof is not taken down in this mine as in many other mines in this district. The grades are very regular and uniform, making the haulways very safe. Drainage and all other requirements in connection with the mine found in first class condition.

JAMES BOONE, Supt.

VAL BACHMAN, Mine Boss.

LOW MOOR IRON COMPANY.

No. 224.

FAYETTE MINE.

This mine is situated in Fayette county, on the north side of New River, and on the main line of the C. & O. R. R., 13 miles west of Thurmond, and 49 miles east of Charleston. The seam operated is the Sewell, and at this place is 380 feet above railroad level and 1,280 feet above sea level, being reached by an incline 1,000 feet in length. The incline is equipped with drum, 9 feet in diameter, having ropes 1 1-4 inches. Two boiler shaped monitors, naving a capacity of 4 tons each, are utilized to transport the

coal down the incline. The monitors dump automatically into a bin at the foot of the incline. This mine has two separate openings, one at the head of the incline and the other 2,500 feet east of the incline. The average thickness of the coal is 3 feet. In some sections of the mine the formation overlying the coal is slate, while in others it is of a boney nature, from 6 inches to 16 inches thick, and making a very good roof. The mine is conducted on the double entry system. The face of the two main entries is over 5,000 feet from the drift mouths. Ventilation is produced by a furnace 10 feet by 4 feet 4 inches high, having grate bars 10 feet long, and when properly attended gives fairly good results. All the product of this mine is hauled by mules. The grades are very regular throughout the mine, and are in favor of the loaded cars. A tandem team of two mules hauls 10 mine cars per trip, having a capacity of 2,500 pounds per car. When this inspection was made the ventilation arrangements were found in satisfactory condition. The general condition of all haulways and working places was found satisfactory, they being free from loose material and dangerous slate. Drainage fairly good at all points. All mechanical appliances were in good repair, with the exception of one rope on the incline, which was considerably worn, but was not considered immediately dangerous.

JAMES KAY, Supt.

A. N. PUTNAM,

J. W. JONES, Mine Bosses.

LOW MOOR IRON COMPANY.

No. 225.

KAYMOOR MINE.

This mine situated in Fayette county, on New River, on the south side branch of the C. & O. R. R., is 51 miles east of Charleston. The seam worked is the Sewell, which is found at this place 540 feet above railroad and 1,460 feet above sea level. The main openings being reached by an incline 1,000 feet in length, which is equipped with a 10 foot drum and 1 1-4 inch steel ropes and two boiler-shaped monitors, having a capacity of 8 tons each. At the head and at the foot of the incline are storage bins, having a combined capacity of 800 tons. The main straight entries in this mine go to the dip about 1 percent. The coal has an average thickness of 3 feet 6 inches, with a good slate roof at all points. Harrison and Sullivan compressed air punching machines are used for mining. A power plant is installed at the foot of the incline and consists of engines of 450 H. P. and 3 large boilers, with the necessary compressing machinery. Arrangements are in progress for the installation of an electric plant for haulage and other purposes. 120 bee-hive coke ovens have been completed and foundation made for an equal number. Although this mine was recently opened the advance entries are in a distance of over 1,000 feet. The mine is developed on the double entry system, each pair of entries being ventilated separately, having over-casts or air bridge for this purpose and no doors being used, where it is possible to dispense with them. The ventilation is produced by a 20 foot fan, operated by compressed air. When last inspected the ventilation of this mine was satisfactory and all

other conditions pertaining to the safety of the mine were in excellent repair and safe in every detail.

JAMES KAY, Supt.

J. C. EASTHAM, Mine Boss.

NUTTALLBURG C. & C. COMPANY.

No. 226.

NUTTALLBURG MINE.

This mine is situated in Fayette county, on the north side of New River, on main line of the C. & O. R. R., about 10 miles west of Thurmond, and 52 miles east of Charleston. The Sewell or Nuttall seam is worked. This and Sewell being the first places on the river where this seam was worked. At this mine the coal is about 500 feet above the railroad and is reached by an incline 1,475 feet long. The incline is equipped with a 12 foot drum, having 1 1-4 inch ropes and two monitors, each having a capacity of 4 long tons. The coal is hauled from the interior of the mine a distance of 7,500 feet by a 7 1-2 ton electric motor, which brings 24 mine cars per trip, having a capacity of 1 1-6 tons each. The power plant consists of 150 H. P. engine and boilers and dynamo is installed at the foot of the incline. The seam of coal varies from 3 feet 6 inches to 4 feet, and in some sections of the mine there is a fairly good slate roof. Two Morgan-Gardner electric mining machines are utilized in mining a part of the coal, the balance of the work being done with the pick. The plan of the mine is on the double entry system. The ventilation is produced by an 18 foot force fan, which gives satisfactory results. The entries in this mine are driven 50 feet from center to center, rooms turned every 50 feet and worked 30 feet wide. All machinery and other appliances in use in and about this mine found in good repair and apparently safe in every detail.

F. R. RAVEN, Supt.

J. SIMS, Mine Boss.

NUTTALLBURG C. & C. COMPANY.

No. 228.

KEENEYS CREEK MINE.

This mine is situated in Fayette county on main line of the C. & O. R. R. at the mouth of Keeneys Creek, a north side tributary of New River, 53 miles east of Charleston. The Sewell or Nuttall seam is operated which at this mine is 581 feet above railroad and 1546 feet above sea level. The drum used is reached by an incline 1250 feet long equipped with 12 ft. drum and 1 1-4 in. ropes and and two iron monitors of 4 1-2 tons capacity each. The combined storage of the bins at the head and foot of the incline is about 300 tons. The mine openings are 980 yards east of the drum house reached by a tramroad along the face of the mountain. The distance from the drift mouth to the face of the advance entries varies from 5,000 to 7,000 feet. The seam varies in thickness from 2 ft. 8 in. to 3 ft. and some parts of the mine has a formation of bone coal immediately overlying the seam which varies in thickness from 4 in. to 30 in. Above this bone coal there is a very good slate roof. The mine car used has a capacity of 1 1-4 tons and all the product is hauled by mules. The double entry system is used in operating the mine. Ventila-

tion of the mine is natural. The location of this mine is favorable for natural ventilation. When last inspected the ventilation throughout the mine was fairly good at all points. An opening runs through the mountain having an elevation of over 125 feet above the drift mouth. All doors, stoppings, condition of roof, timbering, free from obstructions, drainage, etc., and all haulways and working places found satisfactory. All mechanical appliances found safe.

F. R. RAVEN, Supt.

J. W. SMALL, Mine Boss.

NEWLYN COAL COMPANY.

No. 227.

NEWLYN MINE.

This mine is in Fayette County on the north side of the New River on the main line of the C. & O. R. R. 13 1-2 miles west of Thurmond and 48 1-2 miles east of Charleston. The Sewell seam is worked and at this place it is 315 feet above the railroad and about 1200 feet above sea level. The mine is reached by an incline 560 feet long. The incline is equipped with a 6 ft. drum and 1 in. ropes and two boiler shaped monitors, having a capacity of 7 tons, long, each, which dump automatically into a small chute at the foot of the incline. The seam varies in thickness from 2 ft. 8 in. to 3 ft. 3 in. and in some sections a little bone coal is found immediately on top of the seam. Generally the roof is very good. The grades are very regular and principally in favor of the loaded cars. At present there are two separate openings about 700 feet apart but in a short time one of these will be dispensed with and all the product brought out at the drum house opening and a fan or a furnace will be installed in the second opening. The mine is developed on the double entry system. The face of each of the main entries is about 600 feet from the drift mouth. The ventilation as yet is natural. When last inspected the ventilation arrangements, including doors, stoppings and airways were found in excellent shape. The haulways and working places found safe and satisfactory at all points. All other conditions in and about the mine were apparently safe and equal to all requirements.

ED. THOMAS, Supt.

H. P. THOMAS, Mine Boss.

BROWN COAL COMPANY.

No. 229.

BROWN MINE.

This operation is situated in Fayette county on the south side of New River and on the South Side Branch of the C. & O. R. R., 11 miles west of Thurmond and 52 miles east of Charleston. The Sewell seam is worked which at this place is 460 feet above railroad and 1480 feet above sea level. This mine is some times called the South Nuttall. The mine is reached by an incline 1142 feet in length, equipped with a 10 ft. drum and 1 1-4 in. ropes and having two boiler shaped monitors of a capacity of 7 tons each. Storage bins are at the drum house and railroad having a combined capacity of 300 tons. The distance from the drift mouth to the various advance entries is from 3,000 to 3,500 feet. The grades are fairly uni-

form and go slightly to the dip along the line of the main entry. The product is hauled by mules. Developments principally on the double entry system. The seam of coal is very regular in thickness maintaining an average thickness of from 3 ft. 8 in. to 3 ft. 10 in. The ventilation is produced by a furnace 5 ft. 6 in. high over grate bars by 4 ft. 6 in. wide having a shaft 55 ft. When last inspected the ventilation was only moderate, the furnace being inadequate for the requirements of the mine. The doors and stoppings throughout the mine were found in good condition. The general condition of all haulways and working places found safe, free from loose material overhead, securely timbered where necessary and no side obstructions of a dangerous nature. All mechanical appliances in use in and about the mine were found in good condition and apparently safe.

JOHN BROWN, Supt.

PHILIP GRAEF, Mine Boss.

KEENEYS CREEK RAILROAD.

BOONE COAL AND COKE COMPANY.

No. 230.

BOONE MINE.

This operation is situated on the north side Keeneys Creek and on the Keeneys Creek Railroad a branch of the C. & O. R. R., about 3 miles from the mouth of the creek. The Sewell or Nuttall seam is worked. The seam under ordinary conditions varies in thickness from 3 ft. 4 in. to 4 ft. and has a fairly good slate roof, however, the main entry which is driven a distance of 5,000 feet and running slightly to the northeast at the time of this inspection had been driven a distance of 3,300 feet in coal about 16 in. thick having 18 in. of bone coal on top immediately under the roofing slate. This streak of low, faulty coal seems to be running in a northern and southern direction, since two other entries going in the same direction as the main entry about 500 feet distant on the north have struck the same low coal. This seam is reached by a switch-back track and an incline 175 feet in length. At the foot of the incline there is a bin with a capacity of 350 long tons. The development is conducted on the entry and airway system principally. The ventilation is natural and when last inspected was only moderate. The haulways were found free from hanging slate and side obstructions, although the roof cuts considerably in some sections it is timbered when necessary. This being a fairly dry mine the drainage arrangements are all that are necessary. All mechanical appliances in use in and about the mine were found in safe condition. The product of this mine is handled by mules with the exception of one place on the main entry where a gravity plane is operated for a distance of 950 feet on a grade of 6 per cent. on which 3 mine cars constitute a trip. A 6 ft. drum and 3-4 in. ropes being used.

FRANCIS BOONE, Supt.

MICHAEL ZWILLING, Mine Boss.

BALLINGER COAL COMPANY.

No. 231.

BALLINGER MINE NO. 1.

This operation is situated on the south side of Keeneys Creek, 3 1-4 miles from the mouth of the Creek on the Keeneys Creek branch of the

C. & O. R. R. The Sewell or Nuttall seam is worked and at this plant is 190 feet above railroad and is reached by an incline 1150 ft. in length. The mine openings producing the coal at this plant are in the second hill back of the Creek. The distance from the drum to face of advance workings is 6,000 feet. There is a drum 5 1-2 ft. in diameter with 3-4 in. ropes at the back of the first hill by which 12 loaded mine cars are let through the old mine a distance of 2,500 feet which pulls the same number of empty cars through the first hill. The thickness of the seam varies from 2 ft. to 3 ft. 8 in. In some sections of the mine the roofing slate is good, in other sections it is very bad and unreliable. Where the coal seam is thin there is usually a bone coal on top ranging in thickness from 1 in. to 3 in. The developments are conducted on the double entry system. Mine cars are run down the incline to the tippie by a 9 ft. drum and 1 in. rope, one car per trip. At the foot of the incline there is a bin having a capacity of 240 long tons. The ventilation is produced by a furnace having a 4 ft. by 5 ft. front and 10 ft. bars, which gives good results. The doors and stoppings were found in good repair. The condition on all roads and working places in regard to timbering and freedom from loose material and obstructions was very satisfactory. The drainage is good all over the mine. All mechanical appliances were found safe in every detail.

GEO. HOLLAND, Supt.

JOHN OHLINGER, Mine Boss.

BALLINGER COAL COMPANY.

No. 232.

BALLINGER NO. 2 MINE.

This operation is situated on the south side of Keeneys Creek, in the lease adjoining the west side of Ballinger No. 1 Mine and is owned and operated by the same Company. The same seam being worked. The seam at this mine is 158 feet above railroad and is reached by an incline 350 feet long. The bin at the foot of the incline has a capacity of 240 long tons. The mine cars are run down the incline, one car per trip. The drum used is 8 ft. in diameter, having 1 in. ropes. The coal seam averages about 3 ft. 4 in. in thickness and has a fairly good slate roof. The distance from the drift mouth to face of main advance entry is 2,000 feet. The product is hauled by gravity plane inside of the mine 750 feet long on which 3 mine cars per trip are run. Over other distances the cars are hauled by mules. The developments of the mine are on the double entry system. All advance work is going rapidly to the rise, the head of the advance work being about 140 feet above drift mouth. On each side of the lease the covering is light and shallow shafts are sunk for ventilation, there being one recently sunk immediately on the west side and at head of main entry 70 ft. deep which makes a total difference of elevation between the drift mouth and air shaft 210 feet. Under these conditions the ventilation which is natural is very good. The condition of the roof in regard to safety was found very satisfactory, the slate being properly timbered at all points where necessary and roadways free from loose material over head and side obstructions. Although the

grades are favorable for good drainage the drainage is not what it should be, especially so on the main entry, however, during the year much improvement has been made in regard to drainage. All other conditions, including mechanical appliances, found in good repair and generally safe.

GEO. HOLLAND, Supt.

ALBERT OHLINGER, Mine Boss.

BLUME C. & C. CO.

No. 233.

BLUME MINE.

No. 234.

These operations are located about 5 miles up Keeney's Creek. The Sewell seam is operated. There are two separate mine openings, and tipples on the north side of the creek about 1-2 mile apart, known respectively as the Blume Mine No. 1 and Blume Mine No. 2. At the No. 1 Mine the coal is 65 feet above railroad and at No. 2 Mine the coal is level with the railroad. At the No. 1 Mine the storage bin is located having a capacity of 400 tons. The mine cars come out of the mine on a level on to the tippie. At the No. 2 Mine, which has been in operation only a short time, the product is hauled up to a temporary tippie about 25 feet high, and there dumped directly into railroad cars. The average thickness of the seam in both mines is 3 feet 8 inches. A very good slate roof is found all over the No. 1 Mine. In the No. 2 Mine it is somewhat different, some places having a sandstone roof and the other places a very good slate roof, and which in places is somewhat dangerous if not closely attended. The coal, at this particular point, is somewhat out of place, being 40 feet below the natural level of the seam in this locality and is located very near to the north side line of the fault or washout, which traverses this section, which was also encountered by the Rothwell C. Co's operations a few years ago. The developments in both mines are conducted on the double entry system, and at both mines ventilation currents are produced by furnace, which with all ventilating arrangements gives satisfactory results. All haulways, roadways and working places found properly timbered and free from loose slate and side obstructions, and to all appearances both mines were safe. Drainage in No. 1 Mine is good; in the No. 2 Mine it is as yet only moderate; the grades are very irregular and the mine makes a great deal of water. The advance workings are all going to the dip rapidly. All mechanical appliances found in good repair, and apparently safe.

DAVID BOONE, Supt.

THOS. STEAD, Mine Boss.

SMOKELESS COAL COMPANY.

No. 235.

SMOKELESS MINE.

This operation is situated about 3 1-2 miles up Keeney's Creek, on the Keeney's Creek Branch of the C. & O. R. R. The Sewell seam is mined, and at this place is about 340 feet above railroad, and is reached by an incline 800 feet long. The coal varies in thickness from 3 feet 4 inches to 4 feet. In some sections of this mine the roof is a slate, while in others a bone coal varying in thickness from 2 inches to 16 inches. The mine

openings are on the south side of the creek. The distance from the drift mouth to face of main entry is 3,050 feet, and the face of the entry is about 100 feet higher than the drift mouth. The product is hauled by mules. Drum is 9 feet in diameter and ropes 1 11-16 inches, 3 cars of a capacity of 1 1-2 long tons constitute a trip on the incline. Developments are conducted on the single and double entry systems combined, and ventilation is principally natural. On the north side of the lease the coal crops to daylight and openings are made for ventilation and drainage. On the south side the overlying strata are very light and shafts are sunk here, and as a general rule the ventilation is very good. When last inspected a new opening was in progress on the north side and arrangements being made to sink another shaft on the south side, which when completed will make the fresh air pass directly across the face of the advance workings. In some sections of the mine roof is very unreliable and difficult to contend with, roof which is apparently safe one day will be cutting and falling the next, to a thickness of 2 feet for distances ranging from a few feet to 20 and 30 feet, and especially is this true on entries and narrow places. When last inspected the haulways and working places in operation were found in an apparently safe condition, timbered where necessary, free from obstructions or loose material overhead and every precaution seems to have been taken for the safety of the working. The drainage in some sections of the mine fairly good, in others moderate. All mechanical appliances apparently safe.

J. D. CAMPBELL, Supt.

WM. HALL, Mine Boss.

ROTHWELL COAL COMPANY.

Nos. 236 & 237. *DUBREE AND QUARRIER MINES.*

These mines are situated about 4 miles up Keeneys Creek, one on each side of the creek. The Sewell seam is operated, and is 220 feet above the branch railroad. The coal from each mine is brought to the same tippie. The incline on the north side is 500 feet and the incline on the south side is 600 feet long. In the north side mine the coal ranges from 2 feet 6 inches to 4 feet 6 inches, and has slate roof all over the mine. In the south side opening the coal is 3 feet 4 inches to 4 feet in thickness and has a sandstone roof over the entire mine. In both mines the double entry system is used. The ventilation is produced by furnace. The north side mine dips heavily from the drift mouth to the face of the advance workings, while in the south side mine the grades are in favor of the loaded cars. Rope haulage is used in the north side mine for a distance of 1,800 feet; 10 mine cars of 1 1-2 tons capacity constitute a trip. The mine on the south side is reached by a tram-road, 2,500 feet long, extending around the mountain side. One car per trip is lowered on each incline. When last inspected the ventilation and all ventilating appliances were found satisfactory. The haulways and working places in every section were apparently safe and free from loose material overhead and properly timbered and free from side obstructions. The drainage in the north side mine, which is very wet, was found in good condition at some points and at

others only moderate. The south side mine was found to be in good condition throughout.

HERBERT ROTHWELL, Supt.

CHAS. HIGGINS, Mine Boss.

CHESAPEAKE & OHIO MAIN LINE.

VICTORIA C. & C. COMPANY.

No. 238.

NORTH CAPERTON MINE.

This mine is on the north side of New River, on the main line of the C. & O. R. R., 54 miles east of Charleston. The Sewell seam is mined, and at this place is 625 feet above railroad and 1,720 feet above sea level. The mine is reached by an incline 1,360 feet, equipped with a 9 foot drum, 1 1-4 inch ropes and two wooden monitors, each having a capacity of 5 tons. Storage bins are at the foot and head of the incline and have a combined capacity of 400 tons. From the drift mouth to the face of the advance workings is 5,000 feet to 7,000 feet. The product of the mine is hauled from two main stations by a tail rope for a distance of 4,500 feet, 20 to 25 mine cars constitute a trip, each car having a capacity of 1 1-2 tons. 80 H. P. engines and one steam boiler are installed at the foot of the incline. The ropes being 5-8 inch and 3-4 inch. The coal varies in thickness from 3 feet 10 inches to 4 feet 2 inches, and has a fairly good slate roof. All new workings in the mine are being conducted on the double entry system, the entries being 50 feet from center to center, rooms turned every 50 feet and worked 24 feet to 28 feet wide. The ventilation in the front mountain is natural, the conditions being favorable since the openings beyond the mountain are 150 feet above level of the drift mouth. The working in this section of the mine consists of pillar work. A new development is in progress known as the Sugar Camp. The ventilation in this section is produced by a small furnace. When last inspected the ventilation was only moderate. This, however, will be improved when the work now in progress has been perfected. In some parts of the mine doors were found improperly hung, and the attention of the mine boss was called to them and a request made that the doors be hung properly. Condition of the roof at all points was satisfactory, except at the mouth of the 5th right entry in the Sugar Camp mine. Attention of the mine boss was called to this, and he gave the assurance that the matter would be attended to at once. Drainage and mechanical appliances, satisfactory.

H. H. BLACKBURN, Supt.

JAMES GILBERT, Mine Boss.

VICTORIA C. & C. COMPANY.

No. 239.

SOUTH CAPERTON MINE.

This mine is situated on the south side of New River, 53 miles east of Charleston. The product of this mine is conveyed from the mine openings to the tippie on the north side, and on the main line of the C. & O. R. R., over a 2 inch cable, 220 feet long, buckets with a capacity of 2 1-2 tons each being used. A 5-8 inch rope passing over a 5 foot friction wheel is used for moving the buckets on the cable. This system works on the gravity plan. The Sewell seam of coal is worked in this mine and at this

point is 580 feet above the railroad and 1,620 feet above sea level, and varies in thickness from 3 feet 3 inches to 3 feet 10 inches, and has a solid slate roof. The distance from the drift mouth to face of the advance entries ranges from 3,000 feet to 4,000 feet. The product is hauled from two stations in the mine by a tail rope for a distance of 3,000 feet, each trip being composed of 22 to 24 mine cars of a capacity of 1 1-2 tons each. The main advance entries are going to the dip. Developments are on the single and double entry systems combined. The entry pillars being about 50 feet by 110 feet, rooms turned every 50 feet, and worked 30 feet to 35 feet wide. The ventilation is created by a 16 foot exhaust fan. There are two separate intakes, each split supplying different sections. The engines used for haulage purposes are 200 H. P., and are installed at the mouth of the mine, installed in this same building with the engines is a compressor plant, having engines 160 H. P., 2 steam boilers. When last inspected the ventilation, found fairly good. The condition of all haulways, together with drainage, satisfactory. All mechanical appliances safe.

H. H. BLACKBURN, Supt.

THOS. GOSNEY, Mine Boss.

CHAPMAN C. & C. COMPANY.

No. 240.

KLONDIKE OR NEW CAPERTON MINE.

This mine is on the south side of New River, 53 miles east of Charleston and 10 miles west of Thurmond. The Sewell seam is operated, and at this place is 420 feet above railroad and 1,495 feet above sea level. The mine is reached by an incline 1,350 feet in length. The coal is run down the incline in mine cars, three cars per trip, capacity of each 1 1-2 tons. The drum used is 12 feet in diameter, having 1 1-8 inch ropes. In the near future the present arrangements will be changed. Bins are being constructed at the top and bottom of the incline and monitors of 7 tons capacity used instead of the mine cars. The coal varies from 3 feet 3 inches to 4 feet, and has a good slate roof. The larger percentage of this coal is mined by electric machines of the Jeffrey and Morgan-Gardner type. A new system of mining by machines has been adopted at this mine, the machine is built on a frame at an angle of about 20 degrees with the floor, the cutting bars running up towards the roof. After having finished a cut the coal, which is left next to the top, invariably drops down without any blasting or any labor. When the machine cut is put on the bottom and there usually is about 3 inches of coal left on the floor, which has to be dug up with picks, which requires considerable labor, hence this diversion in the plan of making the cut. The electric power plant is located at the foot of the incline. The ventilation of the mine is produced by a 10 foot fan, built by the Covington Machine Co. The developments in the mine are now being conducted on the double entry system. The advance workings are about 2,000 to 2,500 feet from the drift mouth. When last inspected all the conditions throughout this mine were found satisfactory, with the exception of the head of the incline, where no safety blocks were in use. The management was requested to install safety blocks.

C. E. BURNLEY, Supt.

JOHN H. DEMPSEY,

C. W. CANNAN, Mine Bosses.

LONGDALE IRON COMPANY.

No. 241.

CLIFF TOP MINE.

This mine is situated on Glade Creek, 9 miles north of Sewell and 64 miles east of Charleston, on the Longdale Iron Co's narrow gauge railroad, which leaves the main line of the C. & O. R. R. at Sewell, at which latter place the company has 197 bee-hive coke ovens. All of the product of this mine is manufactured into coke and used principally by the company at its furnaces in Virginia. The Sewell seam is worked, and is found at this mine about 35 feet above the bed of the narrow gauge road. The advance workings vary from 7,000 feet to 9,000 feet from the drift mouth. The mine cars are hauled from the interior of the mine a distance of 6,000 feet by a tail rope, which hauls 35 to 40 mine cars per trip, each car of 1 1-2 tons capacity. The haulage plant is installed at the mouth of the mine and consists of 150 H. P. engines, 7-8 inch ropes and 2 steam boilers. The coal varies in this mine from 2 feet 8 inches to 3 feet and in some sections has a very good slate roof, while in other sections it is very moderate and cuts and falls very heavily and especially on the cross entries. In many instances it falls from 4 feet to 6 feet above the top of the coal. The developments are conducted on the double entry system, a 40 foot pillar being between entries and rooms are turned every 50 feet and worked 25 to 28 feet wide. The ventilation, although natural, is fairly good, there being several openings at the back of the operation, which are about 150 feet above the main openings at the drift mouth. When last inspected the condition of all the ventilating arrangements was found in good repair. Haulways and working places examined were found in safe condition and properly timbered and free from side obstructions. The drainage was fairly good. All mechanical appliances apparently safe.

WM. McGUFFIN, Supt.

THOS. A. BURKE, Mine Boss.

CUNARD COAL COMPANY.

No. 242.

CUNARD MINE.

This mine is situated on the south side of New River, 55 miles east of Charleston. The Sewell seam is operated, and at this mine is 780 feet above the railroad and 1,825 feet above sea level, being reached by an incline 1,750 feet long. This incline is equipped with 2 sheave wheels 8 feet in diameter, the rear wheel having three turns of the rope and the front wheel having two turns of the rope, the rope is 1 1-4 inch. Three mine cars constitute a trip, each car having a capacity of 1 1-2 tons. The seam in this mine averages 3 feet 8 inches in thickness and in some sections of the mine there is a sandstone roof and in other sections a slate roof. Developments are conducted on the double entry system, entries 50 feet apart from centers, room are turned 50 feet from centers. The main entry goes to the dip and goes clear through the hill, a distance of about 3,000 feet. Other advance entries are driven from 2,000 feet to 3,000 feet. Ventilation is natural and when conditions are favorable is very good. All hauling is done by mules. When last inspected the ventilating arrange-

ments were found in good condition. The conditions, however, for natural ventilation are not favorable and ventilation in some sections is very moderate. The condition of all haulways and working places in regard to timbering, roof slate, side obstructions, etc., was satisfactory. The drainage, except at certain points on haulways, was found very fair, considering the quantity of water with which this mine has to contend. All mechanical appliances apparently safe.

JOHN LAING, Supt.

THOS. MORGAN, Mine Boss.

BROOKLYN COAL COMPANY.

No. 243.

BROOKLYN MINE.

This mine is situated on the south side of New River, 56 miles east of Charleston. The Sewell seam is worked, and is 795 feet above the railroad and 1,845 feet above sea level. The mine is reached by an incline 1,700 feet long, equipped with 2 sheave wheels, 8 feet in diameter and 1 1-4 inch ropes. Three mine cars are run down the incline per trip, each car of a capacity of 1 1-2 tons. The seam averages 4 feet in thickness and has a sandstone roof in some sections and a slate at others. The developments are conducted on the double entry system, the entries being 40 feet apart and rooms turned 50 feet from centers. The main straight entry goes steadily to the dip and is driven through the mountain, a distance of 2,500 feet, other entries are driven a distance of 2,000 feet to 2,500 feet. All of the entry and some of the room coal is mined by Sullivan and Harrison compressed air machines. The plant supplying the power is installed at the foot of the incline and consists of 250 H. P. engine, 2 steam boilers, each 150 H. P., and an air compressor. The ventilation of the mine is natural and when conditions are favorable the difference in the level of the many openings causes a very fair ventilation. When last inspected the ventilating arrangements in some respects were only moderate, some of the doors and stoppings were in need of repair, to which the attention of the Mine Boss was called and his assurance was given that the defects would be remedied. The condition of all roadways in regard to slate and other obstructions, together with all mechanical appliances, were found satisfactory and apparently safe.

JOHN LAING, Supt.

JAMES LAING, Mine Boss.

C. & O. MAIN LINE.

FIRE CREEK COAL AND COKE COMPANY.

No. 244.

FIRE CREEK MINE.

This operation is on the north side of New River and on the main line of the C. & O. R. R., 4 miles west of Thurmond and 58 miles east of Charleston. The seam operated is known as the Fire Creek or Quinimont. This coal is found about 260 feet below the Sewell seam. The interval between the seams varies in thickness at different points. At all points west of this mine and the Red Ash Mine, on the south side of the river, this Fire Creek seam has not up to date been found in a workable

condition. The coal at this mine is about 620 feet above the railroad and 1,650 feet above sea level. The drum house is reached by a plane 1,200 feet long. The mine openings are 7-8 of a mile east of and 120 feet above the level of the drum house. The product of the mine is hauled by a 12 ton steam locomotive, which hauls 35 to 40 cars a trip, each car having a capacity of 1 1-4 long tons. The distance from the drift mouth to the face of the various advance entries ranges from 1 to 1 1-2 miles, and the main advance entries are not more than 150 feet above the mouth of the mine. The coal is hauled from the interior of the mine by a tail rope haulage plant, which is installed at the mouth of the mine, 50 cars constitute a trip. The ropes are 3-4 inch steel and engines used are 100 H. P. The incline is equipped with two iron monitors, having a capacity of 4 tons each, 2 4 foot friction wheels, on which 1 1-4 inch ropes, are used for operating the monitors. At the foot of the incline the monitors automatically dump into a large bin. The coal in the mine varies in thickness from 2 feet 6 inches to 4 feet 6 inches, and has a very good slate roof. The grades are very irregular. The ventilation is produced by a 14 foot fan, installed near the mouth of the main drift. An opening runs through the mountain to Buffalo Creek, a distance of over two miles, and on the Buffalo side the opening is not less than 150 feet higher than the main drift mouth. Under certain conditions the natural ventilation of the mine overcomes the force of the fan and it becomes necessary to reverse the current of the fan. When last inspected the mine was found in very good condition.

G. H. CAPERTON, Supt.

ROBT. BOYD, Mine Boss.

CENTRAL COAL COMPANY.

Nos. 245 & 246.

CENTRAL MINES NOS. 1 AND 2.

These operations are situated on the north side of New River and on the main line of the C. & O. R. R., 58 1-2 miles east of Charleston. There are two separate seams worked at this place, the Fire Creek and Sewell. The Fire Creek seam is found at this point 505 feet above railroad and 1,535 feet above sea level, and varies in thickness from 2 feet 10 inches to 3 feet 6 inches. The Sewell seam is 1,775 feet above sea level and is from 3 feet 10 inches to 4 feet in thickness. The mine openings are reached in the Fire Creek seam by a plane 980 feet in length. The drum used for letting the coal down the plane is 8 feet in diameter, equipped with 1 1-4 inch ropes and monitors of 5 tons capacity. The bins at the head and foot of the incline have a combined capacity of about 400 tons and so arranged that the coal may be screened when required or loaded run-of-mine. The distance from the drift mouth to the face of the advance entries in the Fire Creek seam is about 7,500 feet. The coal is hauled out of the mine by a head and tail rope system for a distance of about 7,000 feet. The engines are 250 H. P., and are installed with three steam boilers 6,000 feet from the drum house at the back of the mountain, and at an elevation of 250 feet above the drum-house. The coal is hauled from the working places by a tail rope to a main station, from which station it is dropped

by gravity a distance of nearly 6,000 feet to the drum-house, 20 cars constituting a trip. The empty cars are hauled back by the head rope to the tail rope station.

The opening in the Sewell seam is reached by endless rope gravity incline 1,100 feet in length. Two cars are attached at every 250 feet by a grip. The loads on the steep grades supplying the power and haul the coal for a distance of 4,400 feet inside the mine.

The developments in both mines are conducted on the double entry system. The ventilation in the Fire Creek seam is produced by a 10 foot exhaust fan, which gives general satisfaction. The Sewell seam is ventilated by a small furnace. The Sewell seam being near the top of the mountain has in it considerable water standing on the haulways.

J. R. SEAL, Supt.

JOHN RILEY, Mine Boss.

ECHO COAL & COKE COMPANY.

No. 247.

ECHO MINE.

This operation is on the north side of New River, on main line of the C. & O. R. R., 3 miles west of Thurmond and 60 miles east of Charleston. Both the Fire Creek and Sewell seams are worked, but the Fire Creek opening is the principal mine, which at this point is 442 feet above the railroad and 1,480 feet above sea level. The mine openings are immediately at the head of the incline, which is 800 feet in length. The coal is conducted down the incline in two boiler shaped iron monitors, having a capacity of 2 long tons each. The drum used is 8 feet in diameter and has rope 1 1-4 inch diameter. The capacity of the bins at the head and foot of the incline is about 300 tons and the bins are arranged so that the coal may be screened if necessary. The distance from the drift mouth to the face of the main entry is about 7,500 feet. The coal is hauled for a distance of 6,600 feet by an endless rope system, bringing out 30 cars each trip, each car having a capacity of 1 1-2 long tons. The loaded and empty train of cars pass at the half-way station. 160 H. P. engines and 3 steam boilers furnish the power for the haulage at the mouth of the mine. The ropes used are 7-8 inch in diameter. The Fire Creek seam in this mine varies in thickness from 4 feet 4 inches to 5 feet, and has an excellent roof. The grades are somewhat irregular, but as a rule rise in an easterly direction. The head of the main entry being about 1,600 feet above the drift mouth, making an average grade of over 2 per cent. the whole distance, the entry has advanced. The developments are conducted on the double and single entry systems combined. Ventilation produced by a 12 foot exhaust fan. When last inspected the ventilation in some sections of the mine was only moderate. The distance the air has to travel and the leaky condition of many stoppings make the fan power inadequate for the requirements of this mine. Drainage of the mine is good. The general safety of all haulways and all mechanical appliances was satisfactory.

THOS. BEURY, Supt.

GEO. McDANIELS, Mine Boss.

*C. & O. SOUTH SIDE.**RED ASH COAL & COKE COMPANY.*

No. 248.

RED ASH MINE.

This operation is in Fayette county, on the south side of New River and on the South Side Branch of the C. & O. R. R., 3 miles west of Thurmond and 60 miles east of Charleston. The Fire Creek coal is worked and is found at this point 370 feet above the railroad and 1,410 feet above sea level, and varies in thickness from 3 feet 6 inches to 6 feet 4 inches, and in the principal part of the development has a very good slate roof. In some sections of the mine on the west side of the main entry the coal seam has been almost squeezed out by sand rock rolls. The mine is reached by a plane 900 feet in length, which is equipped with an 8 foot drum, 1 1-4 inch steel ropes, and two Barney cars constitute a trip. The distance from the drift mouth to the face of the main advance entry is about 5,000 to 5,500 feet. The product of the mine is hauled from 4 main gathering stations by a 12 ton electric motor, which hauls 20 loaded mine cars each trip, each car having a capacity of nearly 2 long tons. The plant supplying the power operating the motor is installed at the Rush Run Mine, about 1 mile distant. A large portion of the coal in this mine is produced by Harrison mining machines operated by compressed air. The plant supplying this power is installed at the foot of the Red Ash incline, near the tippie. Ventilation is produced by a Thayer exhaust fan 7 feet in diameter operated by compressed air, which gives very good results. When this mine was inspected last the ventilation and all ventilation arrangements, including doors, stoppings, and airways, were found in good repair and in every respect safe. The drainage at all points was excellent. All mechanical appliances were found in a safe and satisfactory condition.

JOHN LAING, Supt.

JOHN LONG, Mine Boss.

JAMES McALLISTER, Fire Boss.

RUSH RUN COAL & COKE COMPANY.

No. 249.

RUSH RUN MINE.

This mine is situated in Fayette county, on the south side of New River and on the South Side Branch of the C. & O. R. R., 2 miles west of Thurmond and 61 miles east of Charleston. The Fire Creek seam of coal is worked and varies from 4 feet 6 inches to 6 feet 6 inches in thickness, and at this mine is 365 feet above railroad and 1,410 feet above sea level. The mine is reached by an incline 900 feet in length. The mine has a fairly good slate roof. Distance from drift mouth to face of advance entries is from about 4,500 to 5,500 feet. The main straight entry goes to the dip. The product of the mine is hauled from the interior of the mine from three main gathering stations by a 12 ton electric motor for a distance of from 4,500 to 5,000 feet, hauling from 18 to 20 mine cars per trip, having a capacity of 2 long tons each. The plant supplying the electric power is installed at the foot of the incline and consists of a 250 H. P. engine and battery of 4 steam boilers. The coal is largely mined by Harrison mining

machines, operated by compressed air. The compressor plant supplying this power also the power for operating the fan and pumps, hoisting and crushing machinery is installed in the same building as the electric plant and has an engine of 350 H. P. Two loaded mine cars constitute a trip on the incline. A drum 9 feet in diameter with ropes 1 1-4 inch in diameter are used. The developments are conducted on the double entry system. Ventilation of the mine is produced by an 8 foot exhaust fan, which gives fairly good results, it is operated by compressed air. When last inspected the ventilation and all ventilating arrangements, including doors, stoppings, airways and fan were found in good repair and excellent working order and very much improved over the conditions as they existed on the previous inspection. All old and abandoned working places were examined as far as possible and at no point was there any indication of gas, except at very high points above the roof line of the seam, where the slate had fallen for some distance. At two places of this kind indication of 1 1-2 to 2 percent. of gas was found. The area over which this extended was very small. The condition on all haulways together with the drainage arrangements, all machinery and mechanical appliances in use found in good working order and apparently safe under all ordinary circumstances.

JOHN LAING, Supt.

WM. D. NESBET, Mine Boss.

LAWRENCE HOLLIDAY, Fire Boss.

THE THURMOND COAL COMPANY.

Nos. 250 & 251.

THURMOND MINES NOS. 1 and 2.

This mine is in Fayette county, on the south side of New River, about a mile west of Thurmond and 60 miles east of Charleston. The Sewell or No. 5 seam is worked. It is found at this point 535 feet above the railroad and 1,665 feet above sea level. The seam varies in thickness from 4 feet to 4 feet 8 inches, and has a fairly good slate roof at all points, except about 4 to 6 inches of draw slate, which has to be taken down by the miners in some sections of the mine. The mine openings are reached by a plane 850 feet in length, equipped with an 8 foot drum, 1 1-4 inch ropes and two boiler shaped monitors, each having a capacity of 6 tons. The storage bins at the head and foot of the incline have a capacity of 600 tons and arranged so that the coal may be screened or loaded run-of-mine. Distance from the drift mouth to the head of the various advance entries ranges from 5,000 to 7,000 feet. The main straight entry goes to the dip. The product is hauled from 2 main stations for a distance of about 5,000 feet by two electric motors, one 10 and the other 8 tons, which haul 10 to 12 mine cars a trip, each car having a capacity of 2 tons. The plant supplying the power to operate the motors, fan, pumps, and other machinery is installed at the foot of the incline near the tippie and consists of 3 engines having a combined power of 450 H. P., 5 dynamos, with voltage of 500 and battery of 4 steam boilers 500 H. P. The developments are conducted on the double entry system principally. Ventilation is produced by a 6 foot high speed fan operated by electricity and located in the mine about

2,000 feet from the drift mouth and gives fairly good results. When last inspected the ventilation and all ventilation arrangements were found in very good order and repair, except several canvas doors, which need to be replaced, they having been torn down and somewhat damaged. General condition of all haulways in regard to timbering, slate, overhead and side obstruction was found in a fairly satisfactory condition. Drainage at all points in a fairly good condition. All mechanical appliances were reasonably safe in every detail.

G. H. CAPERTON, Supt.

THOS. BOYD, Mine Boss.

CHESAPEAKE & OHIO MAIN LINE.

BEURY COAL & COKE COMPANY.

No. 252.

STONE CLIFF MINE.

This mine is on the north side of New River and on the main line of the C. & O. R. R., 64 miles east of Charleston. The Fire Creek or Quinnimont seam is worked, and at this mine is 520 feet above the railroad and 620 feet above sea level. The coal varies in thickness from 2 feet 8 inches to 4 feet. The roof is very irregular, sometimes slate and other times sandstone. The grades are also very irregular in all directions. The mine openings are reached by an incline 1,100 feet in length. The product is hauled over the incline with 2 iron monitors, each having a capacity of 5 tons. The drum used is 10 feet in diameter and has ropes 1 1-2 inches in diameter. The storage bins at the head and foot of the incline have a combined capacity of 300 tons. Distance from the drift mouth to the head of the advance entries is from 3,000 to 5,000 feet. All the product of this mine is hauled by mules. Ventilation of the mine is produced by a furnace, which has a stack and shaft about 50 feet in height. When last inspected the ventilation was found in the greater portion of the mine very good. This mine and the Echo Mine have been connected, which has been beneficial to the ventilation of this mine. Condition of the roof and all haulways and working places was good and no side obstructions of a dangerous nature were observed along the haulways. The mine makes very little water, consequently the drainage is good. All mechanical appliances were found in good repair and equal to all requirements.

C. C. BEURY, Supt.

HARVEY PHILIPPS, Mine Boss.

BIG BEND COAL COMPANY.

No. 253.

BIG BEND MINE.

This operation is situated in Fayette county, on the north side of New River, about 1 1-2 miles west of Thurmond and 61 1-2 miles east of Charleston. The seam worked is the Fire Creek and is 420 feet above railroad and 1,460 feet above sea level, and is reached by an incline 1,800 feet long. The grade on the incline is much less than at any other mine in the New River District. A Barney is used and 4 cars, loaded, are run down the incline each trip, each car having a capacity of 1 1-2 long tons. The drum used

is 12 feet in diameter and ropes used are 1 inch in diameter. The mine opening is at the head of the incline. The distance of the drift mouth from head of the main entry is about 6,000 feet. The product is hauled for a distance of 3,500 feet by tail rope plant installed at the mouth of the mine, which has engine of 40 H. P., 15 to 20 cars constitute a trip. The seam in this mine is very irregular in thickness and grades. The coal averages from 2 feet 6 inches to 5 feet 4 inches. As a general rule the rise is to the east. The head of the main entry is about 60 feet higher than the drift mouth. The advance entries at the present are in very thin coal. The developments are on the double and single entry systems combined. The ventilation is natural. The conditions at this mine are favorable for natural ventilation, since the cross headings come to the outside. The roof is fairly good all over the mine. At some points 4 to 6 inches of draw slate appears. Roadways and working places found free from slate and roof properly timbered where necessary. Drainage fairly good. All other arrangements, including ropes and machinery, in good repair and apparently safe.

JOHN GILMOUR, Supt.

JOHN DEMPSEY, Mine Boss.

BEECHWOOD COAL & COKE COMPANY.

No. 254.

BEECHWOOD MINE.

This mine is in Fayette county, on the north side of New River, 66 miles east of Charleston. The Fire Creek seam is worked and is 740 feet above railroad and 1,860 feet above sea level, and is reached by an incline 1,700 feet long. The mine openings are at the head of the incline. The seam varies in thickness from 4 feet 6 inches to 5 feet and has a very good slate roof. The distance from the drift mouth to face of the advance entries is about 7,000 feet. The product of the mine is hauled for a distance of 5,500 feet by an endless rope haulage, which brings 40 mine cars per trip, each car having a capacity of 1 1-2 tons. The coal is then conveyed down the incline in boiler shaped monitors, each having a capacity of 8 tons. The drum used is 8 feet in diameter and has 1 1-4 inch steel ropes. The engine used for rope haulage is 200 H. P., and operates with 7-8 inch rope. The mine is developed on the double and single entry systems combined. The ventilation of the mine is produced by a 12 foot paddle fan built by Crawford and McCrimmon, and is installed near the drift mouth. The main intake current is about 1 1-4 miles from the drift mouth, near the head of the advance workings. When last inspected the ventilation and all ventilation arrangements, such as doors, stoppings, etc., were in fairly good condition and satisfactory. The general condition of all haulways and working places was free from loose material overhead and side obstructions of a dangerous nature and the roof was properly timbered where necessary. Drainage fairly good at all points. All mechanical appliances were found to be apparently safe.

C. C. BEURY, Supt.

R. B. HANNA, Mine Boss.

ALASKA COAL & COKE COMPANY.

No. 255.

ALASKA MINE.

This mine is in Fayette county, on the main line of the C. & O. R. R., 4 miles east of Thurmond. The seam worked is the Fire Creek or Quinnimont, and is 840 feet above railroad, and reached by an incline 1,940 feet long, over which the coal is carried in two self-dumping monitors, each having a capacity of 4 1-2 long tons. The incline is equipped with a 12 foot drum and has two 1 1-4 inch steel ropes. The mine opening is about 1 mile east of the drum house, over which distance a narrow gauge railroad is operated. A steam locomotive of 7 1-2 tons hauls 25 mine cars of 1 1-2 tons capacity. The coal is hauled a distance of 3,000 feet from the interior of the mine to the drift mouth by an endless haulage, carrying 25 cars per trip. The engine used for this purpose being 200 H. P., operating 7-8 inch steel ropes. The coal in this mine varies in thickness from 3 feet 8 inches to 4 feet 2 inches, and has a fairly good slate roof and is free from impurities. The developments are conducted on the single entry system. Ventilation is produced by an 8 foot open faced fan of the Thayer pattern. The ventilating arrangements were found in a very unsatisfactory condition, there being two doors at the mouth of Nos. 2 and 3 right entries damaged to such an extent as to be absolutely useless, at the Nos. 4 and 5 right entries it was found that no doors had been constructed. The Mine Boss was instructed to remedy these matters immediately, and assurance was given by him that it would be done. A letter was addressed the Superintendent of the mine in regard to this matter. The haulways were found in a thoroughly safe condition and were free from obstructions or loose slate over head. Mine was properly timbered where necessary. The drainage was all that could be desired, there being very little water in the mine. All mechanical appliances were found to be apparently safe.

GEO. LAWTON, Supt.

H. C. PETERS, Mine Boss.

NEW RIVER COLLIERY COMPANY.

No. 256.

SLATER MINE.

This operation is on the main line of the C. & O. R. R., 68 miles east of Charleston. The Fire Creek or Quinnimont seam is operated, and is 793 feet above railroad and 2,008 feet above sea level, and is reached by an incline 2,704 feet long. The incline is equipped with a 12 foot drum, steel ropes 1 1-4 inch in diameter and two monitors of a capacity of 5 tons each. The bins at the head and foot of the incline have a combined capacity of 300 tons. There are two openings to this mine, one at a point 1 mile and the other at a point 1 3-4 miles from the drum house. The first having an elevation of 172 feet and the second an elevation of 300 feet above the drum house. These openings are reached by a narrow gauge road, over which a 10 ton steam locomotive is operated, which hauls from 20 to 40 mine cars per trip, each car having a capacity of 1 ton. The seam varies from 2 to 3 feet in thickness. During the progress of the development of this mine a large number of slate rolls have been encountered, which cut the

seam out entirely. The grades are very irregular and all the advance entries go to the dip. A small stationary engine and a rope are used to pull the cars out, the empty cars running in by gravity. In the 2nd opening, which has been recently opened, the seam varies from 3 feet 2 inches to 3 feet 8 inches, and the advance workings are going slightly to the rise. In both mines there is a fairly good slate roof. The ventilation in both openings is as yet natural. When last inspected the ventilating current in the No. 1 mine was very moderate and in the No. 2 mine fairly good. The drainage in the No. 1 is very moderate, there being a good deal of water and the means used for getting the water out was a water box. In the No. 2 Mine drainage was good. In both mines the haulways and working places were found to have a good roof and to be free from obstructions. All mechanical appliances apparently safe.

WM. THAYER, Supt.

RICHARD SEYMOUR, Mine Boss.

EPHRAIM CREEK COAL & COKE COMPANY.

No. 257.

EPHRAIM MINE.

This is a new mine just being opened.

LOUP CREEK.

HARVEY COAL & COKE COMPANY.

Nos. 258 & 259.

HARVEY MINES NOS. 1 & 2.

These operations are in Fayette county, about 5 miles south of Thurmond, on the Dunn Loup Creek, a tributary of New River, and on the Dunn Loup Branch of the C. & O. R. R., which leaves the main line at Thurmond. The coal operated is the Sewell seam, and is about 60 feet above the railroad. The seam varies in thickness from 3 to 5 feet. In some sections of the mine there is a sandstone roof and in other sections a slate roof of a very unreliable nature. The openings, which consist of two, are known as the No. 1 and No. 2, each of which has a tail rope haulage, and are situated about 1-2 mile up a small creek and are reached by a narrow gauge road, over which a steam locomotive hauls 25 to 40 mine cars per trip. The length of the rope haulage in No. 1 is 1,300 feet and in No. 2, 4,000 feet, each of the haulage plants has a 200 H. P. engine. The ropes are 7-8 inch in diameter, 20 cars constitute a trip, each car having a capacity of 2 tons. The mines are developed on the double entry system, and the ventilation in each mine is produced by exhaust fans. When last inspected the ventilation was found fairly good and satisfactory at all points. The No. 2 Mine has been standing idle for a short time, on account of the water, but this was being rapidly pumped out, and the mine will resume operation in a few days. The general condition of haulways, together with the working places, was found free from loose or dangerous slate over head and obstructions on the roadways. The mines were properly timbered where necessary, and were apparently safe under all ordinary circumstances. The drainage in some sections was good, while in others only moderate. The grades in some sections are very irregular,

and there being a great deal of water with which to contend it is difficult to keep all road in good condition. All mechanical appliances were found to be apparently safe.

F. E. WALKER, Supt.

J. A. McCALLISTER, Mine Boss.

STAR COAL & COKE COMPANY.

No. 260.

STAR MINE.

This mine is in Fayette county, on Dunn Loup Creek, about 6 miles south of Thurmond and 69 miles east of Charleston. The Sewell seam is operated, which is 40 feet above the railroad and 1,645 feet above sea level. The seam varies in thickness from 4 feet to 5 feet 6 inches, and has a fairly good slate roof all over the present operation. The main advance entries are going to the dip about 2 percent. The distance from the drift mouth to the face of the various advance workings ranges from 5,000 to 7,000 feet. The product is hauled from the interior of the mine by a tail rope for a distance of one mile. Engines of 250 H. P., equipped with 7-8 and 3-4 inch ropes and a battery of 3 steam boilers being used for this purpose. 24 to 30 mine cars of 2 tons each constitute a trip. This mine in some sections makes a great deal of water, which all runs to the advance workings. This is pumped by 2 steam pumps of a capacity of 260 gallons per minute, which are installed at a point over one mile within the mine. Four drill holes have been put down from the surface at a depth of 250 feet to the coal, at which point on the surface is located a steam boiler, which furnishes the steam for the pumps. The water is pumped to the surface through one of the drill holes. Ventilation of this mine is produced by a 10 foot exhaust fan of the Thayer pattern. The developments are on the double entry system. When last inspected the ventilation and all ventilating arrangements, including doors, stoppings, airways, were in good condition, and all places were free from fire damp, except one room on the 11th left entry, which had been temporarily suspended, and was properly fenced off and notice of warning was posted. The condition of roof on all haulways and timbering, together with the arrangements for drainage were satisfactory. All mechanical appliances apparently safe.

GEO. JONES, Supt.

DAVID EVANDOLL, Mine Boss.

COLLINS COLLIERY COMPANY.

Nos. 261 & 262.

COLLINS MINES NOS 1 and 2.

These operations are in Fayette county, on Dunn Loup Creek, 8 miles south of Thurmond. The Sewell seam is mined and is 16 feet below the level of the railroad and 1,596 feet above sea level. The openings are about 250 yards back from the main creek. The seam is reached by two short slopes, known as the No. 1 and No. 2 Mines. The product from both openings goes to the one tippie, which is built entirely across the valley and has a drum for each mine. The average thickness of the coal in the No. 1 Mine is 4 to 5 feet, and some portions of the mine have a sandstone roof and some portions a slate roof of a very dangerous nature. The distance from the slope to the face of the advance entries is about 4,500 feet

to 5,000 feet. The length of the tail rope haulage from the main stations is about 3,000 feet. The average thickness of the seam in the No. 2 Mine is 5 feet and has a very moderate slate roof over the entire mine, which has to be closely watched and heavily timbered at all points in order to secure safety. The distance from the slope to the head of the advance entries in the No. 2 Mine is 6,500 feet to 7,000 feet and the length of the tail rope haulage is one mile. The haulage engine at the No. 1 Mine is 300 H. P., and hauls 25 mine cars per trip each car of a capacity of 1 1-2 long tons. At the No. 2 Mine the haulage engine is 500 H. P., and hauls 40 mine cars per trip, each car of 2 long tons capacity. One inch ropes are used on both plants. Both mines are developed on the double entry system. The No. 1 Mine is ventilated by a 12 foot fan, and the No. 2 Mine by a 16 foot exhaust fan. This company has a small machine shop, fitted with all requirements for doing all repair work. When last inspected it was found that a door in the No. 1 Mine had been damaged by the tail rope, and assurance was given that this would be repaired without delay. Ventilation of both mines was found in good condition. Considering the roof in this mine the haulways and working places were found in very reasonable condition, apparently every precaution being taken by the management to keep the roads in safe condition. Drainage in some sections was very good, while in others only moderate, it being almost impossible to keep some sections dry on account of the water finding its way in from the surface. All mechanical appliances were found to be apparently safe. In December, 1900, this company suffered the loss of the store building, but this has been replaced by a magnificent structure.

JUSTUS COLLINS, Supt.

JEFF SANDERS, Mine Boss.

SUN COAL & COKE COMPANY.

No. 263.

SUN MINE NOS. 1 & 2.

This operation is in Fayette county, on Dunn Loup Creek, and on the Loup Creek Branch of the C. & O. R. R., 8 miles south of Thurmond and 73 miles east of Charleston. The Sewell seam of coal is operated, and at this point is about 60 feet below the level of the railroad and at an elevation of 1,562 feet above sea level. The coal is reached by a slope, the length of which, including the height of tipple is 342 feet, also by two shafts, one of which is 3,000 feet distant from the foot of the slope, and the other shaft is situated very near the slope. The first shaft is 160 feet in depth and is 12 feet by 22 feet in cross section, having three compartments, two for hoisting purposes and one for manway. When inspected only one compartment of the shaft was being used for hoisting coal. The tipple at this shaft is 60 feet above the surface and the cages are self-dumping. Bins of a capacity of 100 tons receive the coal at the top of the shaft and are provided with screens. One hundred and twenty bee-hive coke ovens have been completed near the shaft and are equipped with an electric larry car for the purpose of charging. A 150 H. P. double engine is used for hoisting and 1 inch steel ropes. The second shaft is 9 feet by 15 feet in cross section, and is used exclusively for ventilation. When inspected

an 8 foot Thayer fan of a capacity of 45,000 cubic feet per minute was in use, but it was the intention to replace this fan with a fan of the Capell type, with a guaranteed capacity of 200,000 cubic feet per minute. The fan and engine were on the property when the mine was last visited. The product taken from the slope is hauled by a sprocket chain, driven by a steam engine, dogs are placed every 40 feet on this chain, which catch in a bracket on the bottom of the mine cars. Eight loaded cars of a capacity of 1 1-2 tons each and 8 empty cars is the capacity of this sprocket chain. The engine for driving this chain is 150 H. P. The coal is hauled from the interior of the mine to the foot of the slope a distance of 3,000 feet by an electric motor, which hauls 40 to 50 mine cars per trip. The electric plant is installed near the hoisting shaft, down which the wires are conveyed to the interior of the mine. The engines of the electric plant are 200 H. P. and the dynamos are 600 volts. In the electric power building is installed an air compressor, which is to be used for mining purposes, it has engines of 250 H. P., 3 tubular boilers of 100 H. P. each furnish the steam for these engines. The developments of the mine are conducted exclusively on the double entry system, and break-throughs are made in accordance with the grades encountered, never, however, exceeding 100 feet apart, usually much shorter distance apart. The ventilating current is split into two currents, east and west. When inspected the ventilation and all ventilation arrangements were found in a very satisfactory condition at all points. The haul-ways and working places were found free from loose material over head, clear of side obstructions of any character and the mine safe in every detail under ordinary circumstances. The drainage of the mine was fairly good. The coal in this mine varies in thickness from 4 feet 8 inches to 5 feet 8 inches, and has a fairly good slate roof. It has, however, at some points over small areas a sandrock roof, and there are no impurities in the seam.

JAMES LAING, Supt.

JAMES MARTIN, Mine Boss.

JAMES McDONALD,

JOHN McMULLIN, Fire Bosses.

McKELL COAL & COKE COMPANY.

No. 264.

KILSLIH MINE.

On June 27th, 1901, this mine was visited. This is a new operation in Fayette county, on Dunn Loup Creek, about 13 miles south of Thurmond and 76 miles east of Charleston. The mine had only been opened recently, and the improvements were then under way. The tippie in use was only temporary, 5 drift openings had been made and many improvements of a substantial nature were in progress. A very commodious and convenient store, about 40 miners' houses, stables, extensive side-tracks and other necessities were under construction. The entries are being operated night and day. The seam which is being operated is the Sewell, and is found about 30 feet above railroad level and 1,750 feet above sea level. The coal measures 5 feet in thickness and has a fairly good slate roof.

THOS. NICHOLS, Supt.

McKELL COAL & COKE COMPANY.

No. 271.

DERRYHALE MINE.

This operation is in Fayette county, on Dunn Loup Creek, about 9 miles south of Thurmond and 73 miles east of Charleston. The Sewell seam is operated and at this place is 16 feet above railroad and 1,642 feet above sea level. The coal varies in thickness from 5 feet to 5 feet 10 inches, and including a bone coal, which is found in the middle of the coal seam in this mine, varying in thickness from 2 to 6 inches. The formation immediately overlying the seam and forming the roof is a very soft and unreliable slate and has to be very carefully watched and closely timbered to be safe on the haulways and working places. The developments are exclusively on the double entry system. The distance from the main entry to the face of the various advancing entries is about 1,200 to 1,500 feet. The ventilation is produced by a small furnace, in a short time, however, an 8 foot open faced fan driven by an 8 H. P. gasoline engine will be installed, as the material was on the premises when last visited. The product of the mine is hauled by mules. The mine cars have a capacity of 1 1-2 long tons. When last inspected the ventilation was found ample for the requirements and all ventilation arrangements were in good form and repair. General condition of all haulways and working places examined, safe under all ordinary circumstances, carefully timbered and free from side obstructions. Drainage of the mine was good.

THOS. NICHOLS, Supt.

THOS. A. LEWIS, Mine Boss.

DUNN LOOP COAL & COKE COMPANY.

No. 265.

DUNLOOP MINE NO. 1.

This mine is in Fayette county, on the Loup Creek Branch of the C. & O. R. R., 8 1-2 miles south of Thurmond and 61 1-2 miles east of Charleston. The Sewell seam is operated and is 58 feet above railroad level and 1,652 feet above sea level. The mine openings come out level with the tipple floor. The coal varies in thickness from 4 feet 8 inches to 5 feet, and has a slate roof, principally of a very dangerous and uncertain nature in the main drift and in the west side drift there is considerable sandrock roof. A considerable portion of the work in this mine now is the robbing of pillars. The product is all hauled by mules. The grades as a rule being in favor of the loaded cars. The ventilation is natural. When this inspection was made the ventilation was very good at all points. Drainage only moderate, there being many muddy holes and much water in both drifts, and especially so in rainy weather, there being a very light cover over the seam in many places, and where the coal seam has been robbed out, it has fallen to the surface. Condition of all haulways is very good, properly timbered where necessary and free from slate of a dangerous nature and side obstructions. All mechanical requirements were in good repair and apparently safe in every respect.

JAMES McGUFFIN, Supt.

A. P. GIBSON, Mine Boss.

DUNN LOOP COAL & COKE COMPANY.

No. 266.

DUNLOOP MINE NO. 2.

This operation is in Fayette county, on the Loup Creek Branch of the C. & O. R. R., 9 miles south of Thurmond and 72 miles east of Charleston. The Sewell seam is worked, and at this point is 60 feet above railroad grade and 1,810 feet above sea level. The mines come out on a level with the tippie floor. The seam averages 5 feet to 5 1-2 feet thick, and has a slate roof over it in some sections fairly good, in others very soft and full of faults and very dangerous if not carefully watched. The developments are on the double entry system, 50 foot pillars being left between entries and rooms are turned every 50 feet and worked 30 feet wide. The advance entries go principally to the rise and are in a distance from the drift mouth about 1,800 to 2,500 feet. The coal is handled for a distance of 1,800 feet from a gathering station by a tail rope driven by 200 H. P. engine, 7-8 inch ropes being used; 24 loaded mine cars having 2 tons capacity constitute a trip. The ventilation of the mine is produced by a 10 foot open faced exhaust fan, which gives very good results. When inspected June 26th, 1901, the ventilation was found fairly good at all points. The conditions of all haulways and working places examined as to drainage, mechanical appliances was satisfactory, and apparently safe in every detail.

JAMES MCGUFFIN, Supt.

A. P. GIBSON, Mine Boss.

TURKEY KNOB COAL COMPANY.

No. 267.

TURKEY KNOB MINE.

This mine is in Fayette county, on Loup Creek Branch of the C. & O. R. R., 11 miles south of Thurmond and 74 miles east of Charleston. The seam operated is the Sewell and at this point is about 170 feet above the railroad and 1842 feet above sea level. The mine openings are 1-2 mile up Turkey Creek and are reached by a spur track running up to the tippie where are located the coke ovens, store house and miners' dwellings. The seam varies in thickness from 4 ft. 4 in. to 5ft. 4 in. and on the advance entries going in an eastern direction there is a sandrock roof, and on other sections there is a slate roof. The grades are especially heavy in this mine, rising rapidly eastward. At present all the product is hauled by mules. There is, however, a new endless rope haulage being installed, engines 150 H. P. and 4 boilers were in place. Active preparations for the change were being made inside the mine. Ventilation is natural. The advantage of this system being the favorable conditions surrounding the lease up to date. When last inspected the ventilation and ventilation arrangements were in good shape. The general safety of the haulways and working places examined found equal to all requirements and free from loose material of all kinds over-head and side obstructions of any nature and the roof properly timbered where necessary. The drainage was fairly good, and considerably improved in some sections since the previous inspection.

ED. CRICKMOOR, Supt.

JOHN JACKSON, Mine Boss.

MACDONALD COLLIERY COMPANY.

No. 268.

MACDONALD MINE.

This mine is in Fayette county on Dunn Loup Creek on the Loup Creek Branch of the C. & O., 11 miles south of Thurmond and 74 miles east of Charleston. The Sewell seam is operated and is found 100 feet above railroad level and 1778 feet above sea level. The mine openings and tipple are back about 250 yards from the main Branch line and are reached by a spur track. The seam will average in thickness in all advance works 5 ft. to 5 ft. 10 in. The formation over-lying the coal is very irregular, sometimes slate of considerable thickness and sometimes sandrock; in many working places a sandrock roof on the one side and slate of considerable thickness on the other side. The developments are conducted principally on the double entry system. The distance from the drift mouth to the face of the advance entries is from 6500 to 7500 feet. The product of the mine is hauled for a distance of 5,000 feet by an endless rope. Double tracks extend along the whole distance and 50 loaded cars are brought out while 50 empty cars are taken into the mine, each car has a capacity of 2 long tons. Engines used are 160 H. P. and operate 7-8 inch rope. The coal in all entries and part of the rooms is mined by compressed air machines. A 350 H. P. compressor engine is installed at this mine. In addition to the above machinery there is an electric plant with powerful engines and 2 large dynamos. At present the electric power is used during the day to operate the larry cars between the tipple and coke ovens, a distance of about 3000 feet, and at night it is used for the purpose of illuminating the stores, offices, miners' houses, school house, churches etc. In the near future it is the intention of the Company to haul coal on the cross entries with electric power. Ventilation of the mine is produced by an 8 ft. open faced fan operated by compressed air. This fan will in the near future be replaced by a large fan as the one now in use is inadequate for the requirements. When inspected on April 11, 1901, the ventilation in some sections was found good, in others only moderate. The ventilation arrangements were found in fairly good repair. Condition of haulways and working places, safe at all points. Drainage good and all mechanical equipments in good repair and apparently safe in every detail.

SAMUEL DIXON, Supt.

J. V. MILLER, Mine Boss.

SUGAR CREEK COAL AND COKE COMPANY.

No. 269.

SUGAR CREEK MINE.

This mine is in Fayette county on Dunn Loup Creek and on the Loup Creek Branch of the C. & O. R. R., 11 1-2 miles south of Thurmond and 74 1-2 miles east of Charleston. The Sewell seam is operated and is found 15 feet above the C. & O. R. R. grade and 1762 feet above sea level. The seam varies in thickness from 4 ft. 6 in. to 6 ft. 4 in. and has a slate roof all over the mine, in some sections fairly good, while in others only moderate, and very unreliable, which has to be watched and carefully timbered.

Developments are conducted on the double entry system. The main advancing works go steadily to the dip. The distance from the mouth of the slope to the face of the main advance entries is about 3000 to 4000 feet. The product of the mine is hauled a distance of 2800 feet by a 7-8 inch tail rope haulage plant having 200 H. P. engines which hauls 25 mine cars per trip, each car has a capacity of 1 1-2 long tons. The haulage system delivers the cars to the foot of the elevator, the cars are then hoisted and dumped automatically into a bin of 240 tons capacity and so arranged that the coal may be screened or loaded run-of-mine as circumstances may require. The engines used for hoisting are 150 H. P. and ropes 1 inch in diameter. In addition to this machinery there is a powerful electric plant installed in the same building, at present it is used at night for illuminating purposes only, but in the future it will be used for pumping purposes and haulage on the entries. Ventilating currents produced by fan operated by steam. When attended gives fairly good results. When last inspected the ventilation in some sections and especially at the head of the 8th left and main straight entries was found only moderate, while in other sections good. This condition was brought about to some extent by the door on the right side having to be repeatedly opened for the passage of the mine cars. It was suggested that some change be made which if effected will remedy this defect. Working places and haulways when examined found fairly well timbered at all points and free from side obstructions, however, if not carefully attended this roof is liable to become dangerous in a short time. Drainage of the mine very poor. All mechanical appliances were found in good repair and safe.

SAMUEL DIXON, Supt.

E. J. ROBERTSON, Mine Boss.

WHITE OAK FUEL COMPANY.

No. 270.

BRAGG HILL SHAFT.

This colliery consists of 2 shafts which are being sunk to the Sewell seam. The shafts are situated about 2 miles from the Town of Glen Jean on the White Oak Branch of Dunn Loup Creek. The No. 1 or Bragg Hill Shaft is a circular pit 20 feet in diameter and is sunk to a depth of 390 feet where the seam was found 6 ft. in thickness. On the date of inspection December 27, 1900, it was impossible to see the coal on account of several heavy blasts which had been fired just previous to the arrival of the Inspector. The No. 2 Shaft is rectangular in cross section 12 feet by 22 feet and was down a depth of 100 feet. The railroad has been completed to both shafts and at the No. 1 Shaft the frame work for the permanent hoisting arrangements and a tippie together with all necessary machinery for hoisting and ventilating are on the ground and ready to be put into position and the development of the mines will be pushed as rapidly as circumstances will allow. The work is in the hands of experienced and practical men and all the material being used is of a first class nature. The machinery and fans which are being put in are of the latest and most improved styles and up to date in all their appointments. The

management is worthy of praise for the efficient and careful manner in which this work has been conducted there being but one fatal accident during the progress of the work to date which covers a period of 2 years. A fire occurred at this mine on Nov. 15th, but no person was injured as a result of the fire. The fire is supposed to have been caused by the workmen's clothes falling from their supports and coming in contact with a stove in the dry house, in which was stored 100 lbs. of dynamite and a large number of percussion caps. The dry house was the first to be discovered on fire and in turn the boiler house, engine house and head house at the shaft were consumed. At the time of the breaking out of the fire seven men were at work at the bottom of the shaft, which at that time was 360 feet deep. Had it not been for the bravery displayed by the Superintendent, J. J. Smiley and E. P. Thornton, the engineer, these men would not have been rescued. The engineer remained at his post and hoisted the men while the superintendent stood with a broom fanning the flames of the burning house from the engineer. In less than 5 minutes after the last man was taken from the shaft the roof of the engine house collapsed. The dynamite in the dry house fortunately did not explode.

J. J. SMILEY, Supt.

ISAAC SWIFT, Mine Boss.

LAUREL CREEK BRANCH.

QUINNIMONT COAL COMPANY.

No. 272.

BIG QUE MINE.

This operation is in Fayette county on Laurel Creek, a north side tributary of New river, and on the Laurel Creek Branch of the C. & O. R. R., 4 1-2 miles from Quinnimont and 78 1-2 miles east of Charleston. The Quinnimont or Fire Creek seam is worked and at this mine is 315 feet above the railroad and 2235 feet above sea level, and is reached by an incline 1,400 feet in length. The mine openings are immediately at the head of the incline. The seam varies in thickness from 4 ft. to 4 ft. 8 in. and has a fairly good slate roof all over the mine. The distance from the drift mouth to the face of the advance entries is about 6000 feet. The mine has passed through the front hill and is now being driven into the second hill. The product of the mine is hauled for a distance of 4000 feet by an endless rope haulage, 21 cars being hauled each way per trip. The mine cars are run down the incline three per trip. A new tippie, plane and drum house are now being built and when completed the coal will be run down the incline in 8 ton monitors. The new tippie bin will have a holding capacity of about 300 tons and will be so arranged as to screen the coal if necessary and will be fully equipped with the latest improvements, such as elevators, crushers, etc. The drum used on the plane is 8 ft. in diameter and ropes 1 1-4 inches. The engine used for haulage is 40 H. P. driving 7-8 inch ropes. The developments are conducted on the double entry system. When the mine was inspected on April 23, 1901, ventilation and all ventilating arrangements were found in fairly good

condition, there being several openings at points very near the advance workings. The general condition of all haulways and working places was found in all respects safe and free from loose material over head and side obstructions. The drainage of the mine was found to be good. All mechanical appliances were apparently safe.

D. C. BOYCE, Supt.

JAMES McCREARY, Mine Boss.

ROBINS COAL COMPANY.

No. 273.

ROBINS MINE.

This operation is in Fayette county on Laurel Creek, 3 miles from Quinimont and 76 miles east of Charleston. The seam worked is the Fire Creek which is found 500 feet above the railroad and 2250 feet above sea level, and is reached by an incline 1800 feet in length. The coal varies in thickness from 18 inches to 3 ft. 10 in. Many rolls have been encountered during the development of this mine and in many instances the coal has been cut out entirely for short distances. The mine is developed on the double and single entry systems combined. The ventilation when last inspected was natural which was found in some sections fairly good and in others only moderate. Haulways and working places were found to be in a safe and satisfactory condition. The drainage was very poor, roads in many places sloppy and disagreeable. All other arrangements in fairly good shape. The drum at the head of the incline is 12 ft. in diameter and ropes 1 inch, monitors having a capacity of 7 tons.

JOHN GOULD, Supt.

GEO. McINTOSH, Mine Boss.

LAUREL CREEK COAL COMPANY.

No. 274.

LAUREL CREEK MINE.

This mine is in Fayette county on Laurel Creek, 4 miles from Quinimont and 77 miles east of Charleston. The Fire Creek seam is worked at this point and is 466 feet above the railroad and 2250 feet above the sea level, and is reached by an incline 1750 feet long. The seam varies in thickness from 3 ft. 6 in. to 4 ft. 5 in. and has a very good solid slate roof. Mine openings are immediately at the head of the incline. Distance from the drift mouth to the face of the main entries is 4,000 to 5,000 feet. An endless rope haulage is used to bring the product about 3,000 feet from the interior of the mine, which hauls 18 to 20 cars per trip, each car having a capacity of 1 1-2 tons. The engine is 200 H. P. and ropes 7-8 inch. Two 8 tons monitors are used to convey the coal from the drum house to the railroad tippie. The drum used being 10 feet in diameter with ropes 1 1-4 inches. The developments of the mine are on the double and single entry systems combined and the main face entries being double and the cross entries single, 240 feet apart. The ventilation is produced by a 10 ft. exhaust fan. On April 24, 1901, when this inspection was made the ventilation in the left side of the mine and in the main straight entry was found in very good shape. On the right side, however, the ventilation was very moderate and particularly so at the head of the

right hand entries. The general safety of roadways and working places was found satisfactory. Drainage in some sections fairly good, in others very bad. This, however, was brought about to some extent by the pump being out of repair allowing the water to accumulate. All mechanical appliances were found safe and in good repair.

W. A. BROWN, Supt.

J. H. BROWN, Mine Boss.

GREENWOOD COAL COMPANY.

No. 275.

GREENWOOD MINE.

This operation is in Fayette county, on the Laurel Creek Branch of the C. & O. R. R., 5 miles from Quinimont and 79 miles east of Charleston. The Fire Creek or Quinimont seam is worked and is found 320 feet above the level of the railroad and 2290 feet above sea level. The seam is reached by two inclines 800 feet in length, each being equipped with drums 10 feet in diameter having ropes 1 1-4 inches, and boiler shaped monitors of a capacity of 8 tons each. The seam of coal ranges from 3 ft. 8 in. to 4 feet in thickness and in some sections of the mine has a very good roof, while in others it is only moderate. There are 12 mine openings out of which the coal is hauled. The product of the mine from one-half the openings going over each incline. The openings are reached from the drum house by a narrow gauge railroad. Some of the openings are at least 1 1-4 miles distant from the head of the incline. The product is hauled from these various openings by 2 12 ton steam locomotives, each of which hauls 30 mine cars per trip, each car having a capacity of 1 1-2 long tons. Several of these drifts are driven in a distance of 2500 feet to 3000 feet and arrangements were in progress on April 23, 1901, to install mechanical power for hauling the coal within the mine. Developments formerly were conducted principally on the single entry system and ventilation natural. The shape of the lease being such that drifts to daylight for ventilation and drainage were very easily and inexpensively made. The conditions in the future, however, will not be so favorable and double entries have been adopted in some sections and arrangements were being made for the installation of a fan. When last inspected the ventilation in some sections was found all that could be desired, while in others it was very moderate. The general condition of all haulways and working places was fairly good, being well timbered where necessary and free from loose side and over-head material of any kind. Drainage fairly good. All mechanical appliances were apparently safe.

W. A. BROWN, Supt.

WM. CRICKMOOR, Mine Boss.

SMITHERS CREEK BRANCH OF THE K. & M. R. R.

CARBON COAL AND COKE COMPANY.

No. 276.

CARBON MINE.

This operation is situated in Fayette county on the Smithers Creek Branch of the K. & M. R. R., which leaves the main line at Cannelton about 28 miles east of Charleston and on Smithers Creek, a north side trib-

utary of the Great Kanawha River. The No. 2 Gas seam is worked and at this mine is 105 feet above the railroad and 775 feet above sea level. The mine openings are reached by an incline 150 feet long, equipped with a drum 6 feet in diameter and ropes 3-4 inch; one car of 1 1-2 tons capacity is run down the incline per trip. The output of the mine is mostly screened over a 1-2 inch screen. The tippie arrangements including dumps, screens, elevators, coal crushers and other mechanical appliances are of a very substantial nature and up to date in their appointments. The seam in this mine has an average thickness of about 5 ft. 8 in. and is free from the usual impurities found in this seam, and has a good slate roof, which requires a very small quantity of timber as a general rule. The developments are conducted on the double entry system. The entries being 50 feet from center to center and rooms being turned every 75 feet and worked 28 to 30 feet wide. The distance from the drift mouth to the various advance entries ranges from 1500 to 2000 feet. The main straight entries are going slightly to the dip. The product is hauled for a distance of 1200 feet by a 12 ton electric motor, which hauls 20 mine cars per trip. The largest portion of the coal produced is mined by machines of the Morgan-Gardner type. The electric power to operate the motor, machines, several incandescent lights on the entries and the fan is supplied at present by the National C. & C. C's. plant at the Raven Mine, about 1 1-2 miles distant. The ventilation of the mine is produced by a 7 ft. open faced exhaust fan which gives very good results. When inspected on June 18, 1901, the ventilation and all ventilation arrangements, the condition of haulways and working places as to drainage and general safety and all mechanical appliances in use were very satisfactory. The No. 2 opening which is located about 2500 feet from the drum house and is reached by a tram-road which follows the mountain side, when visited was not in operation but when in operation the ventilation is produced by a good furnace.

C. A. CABELL, Supt.

C. A. HUGHES, Mine Boss.

NATIONAL COAL AND COKE COMPANY.

No. 277.

NATIONAL MINE.

This operation is situated in Fayette county on Smithers Creek, a north side tributary of the Great Kanawha River, and on the Smithers Creek Branch of the K. & M. R. R., which leaves the main line at Canelton. The No. 2 Gas seam is operated and in this mine ranges in thickness from 4 ft. 8 in. to 5 ft. 8 in. and is almost free from sulphur and other impurities generally found in the upper part of the seam in that section. The coal is over-laid with a very heavy slate formation which makes an excellent roof. The seam at this mine is about 80 feet above the railroad and 810 feet above sea level. The mine openings are reached by an incline 192 feet in length and equipped with sheave wheels, but which will soon be replaced with a drum. The ropes used are 3-4 inch; one car of 1 3-4 tons capacity constitutes a trip on the incline. When inspected on June 18, 1901, the coal was being shipped principally run-of-

mine. The tippie arrangements are substantial but had not been completed. The material for elevators, coal crushing machinery, equipment for charging coke ovens, etc. were all on the premises and were to be installed immediately. All mining is done by the Morgan-Gardner electric machines. The power to operate the machines is supplied by an electric plant which is installed near the tippie and consists of a 250 H. P. engine, 2 steam boilers and a large dynamo. The developments are conducted on the double entry system, the entries having 40 ft. pillars and rooms turned every 60 ft. between centres and worked 28 to 30 feet wide. The distance from the drift mouth to the face of the advance entries is 1000 to 1800 feet. Ventilation, when inspected, was produced by a small furnace, which was to be shortly abandoned as active preparations were in progress for the installation of a first class fan. When last inspected the ventilation and drainage were satisfactory. The haulways and working places were free from dangerous material and mechanical appliances were apparently safe.

J. W. GOODSPEED, Supt.

LEE JENKINS, Mine Boss.

CHESAPEAKE & OHIO SOUTH SIDE.

W. P. REND.

Nos. 278, 279, 280, 281 & 282. *MINES NOS. 1, 2, 3, 4, & 5.*

This operation is situated in Fayette County about one mile west of Thurmond and 62 miles east of Charleston at the mouth of Arbuckles Creek, a south side tributary of New River. The Fire Creek and Sewell seams are worked. The Fire Creek seam is found 182 feet above the level of the C. & O. R. R. and 1362 feet above sea level. It is reached by an incline 485 feet in length. The mine openings in this particular seam are very near the head of the incline and are known as the No. 1 Mine. The seam varies in thickness from 3 ft. 6 in. to 6 ft. and has a very good slate roof. The openings in the Sewell seam are situated about 2 or 3 miles distant from the drum house and are known as the Nos. 2, 3, 4 & 5 Mines. At these mines there are eight openings which are 178 feet above the level of the drum house and 1540 feet above sea level. They are reached by a narrow gauge railroad along the face of the mountain commencing at the drum house at the head of the incline. On this narrow gauge road there are 3 12 ton steam locomotives and one 12 ton electric motor used to haul the product from the openings to the drum house, 20 mine cars per trip, each car having a capacity of 2 tons. The Sewell seam in these upper mines averages about 4 ft. 8 in. to 5 ft. in thickness. In the No. 2, 3 and 5 openings there is a slate roof, in Nos. 3 & 4 openings which are the greatest distance up the creek the roof is sandstone. In the development of these openings which are the farthest up the Creek there have been encountered several heavy rock rolls. A large percentage of the coal in all these mines is won by electric and compressed air machines. There is installed at each of the mines, Nos. 1, 2 & 4, an air compressor and at the No. 2 Mine is installed an electric plant which sup-

plies the power to operate the motor on the narrow gauge road, several mining machines and a large number of incandescent lights which are distributed throughout the main haulways in the mines, the drum house, planes, engine house work shops and tipples. The engine used for generating these forms of power range from 250 H. P. to 400 H. P. There are 7 tubular boilers in use. The ventilation in the No. 1, 2, 3 and 5 mines is produced by 4 10 ft. exhaust fans, in the No. 4 Mine the ventilation is produced by furnace. The product of all the mines is gravitated over the incline and 5 ton monitors, a drum 9 ft. in diameter and ropes 1 1-4 inches being used. The tipple bins having a capacity of about 300 tons and are so arranged that the coal may be shipped run-of-mine or screened as desired, and may be loaded in open or closed cars. A coal crusher is installed at the tipple. The distance from the drift mouth to the face of the various advance entries ranges from 1000 to 2000 feet. The grades in general are very regular and mostly in favor of the loaded cars. The developments in all of the mines are conducted on the double entry system. When last inspected the ventilation of all mines was found in a very favorable condition and all doors and stoppings and fans were found in excellent repair. All haulways and working places were found carefully timbered and free from any loose material over head and along the sides. The drainage in all of the mines except the No. 1 was found good, and properly attended. All mechanical appliances were found to be apparently safe.

During the year the superintendents and Mine Bosses under went changes in these mines.

DAVID ORR,

JOSHUA SWITZER,

J. THURMOND, &

FRANK HESS, Mine Bosses.

GEO. MORAN, Supts.

GAULEY RIVER BRANCH.

NICHOLAS COUNTY.

BELL CREEK COAL COMPANY.

No. 283.

BELVA MINE.

This operation is situated in Nicholas county, on the waters of Twenty-Mile and Bell Creeks, which are tributaries of the Gauley River and about 7 miles north of the Gt. Kanawha Falls. The Coalburg seam is being operated and at this point is 600 feet above the level of the C. & O. R. R. and 1500 feet above sea-level, and is reached by an incline 1300 feet long. There are five drifts which are about 3000 feet west of the drum house. A narrow gauge road over this distance is about completed. The openings have been driven in distances from 80 to 100 feet. The seam has an average thickness of 3 ft. 11 in. to 4 ft. 2 in., including about 1 to 2 inches of bone coal about the middle of the seam. The formation overlying the coal is slate and is only moderate for a roof, indications are, however, that as the entries advance into the hill the slate will become more solid

and form a fairly good roof. When visited on April 15, 1901, the tippie and incline were almost completed and will represent a very substantial piece of work. The tippie spans Twenty-mile Creek in order to reach the C. & O. line. The drum is 12 ft. in diameter. A new 7 ton mine locomotive and mine cars were on the ground ready to be placed in service as soon as the tippie and drum house were completed. Development will be conducted on the double entry system and will be pushed rapidly as soon as shipments can be made.

A. J. STRAUGHAN, Supt.

RALEIGH COUNTY.

CONDITION OF MINES AS REPORTED BY EDWARD PINKNEY.

PINEY BRANCH.

ROYAL COAL AND COKE COMPANY.

No. 284.

ROYAL MINE.

This operation is in Raleigh County 73 miles east of Charleston on the south side of New River and immediately opposite the Town of Prince on the C. & O. R. R. The No. 4 or Fire Creek seam is worked and is found at this point 710 feet above the railroad and 1915 feet above sea level, and is reached by an incline 1700 feet long. The seam varies in thickness from 2 ft. 6 in. to 4 ft. 6 in. and has a very good slate roof. The distance from the drift mouth to the face of the advance entries ranges from 4000 to 7000 feet. The product is hauled for a distance of 5000 feet from two main stations situated within the mine by a tail rope which hauls from 30 to 40 mine cars per trip, each car having a capacity of 1 1-4 tons. The engines used are 160 H. P., the ropes used are 7-8 and 3-4 inch. During the year a new drum house, incline and railroad tippie were built, equipped with coal crushing machinery, elevators, etc. The drum used is 8 ft. in diameter, ropes 1 1-4 inches. Two boiler shaped monitors of a capacity of 6 tons convey the coal down the incline, the bins at the top and bottom of the incline having a combined capacity of about 400 tons. Formerly all the product of this mine was carried in 1-2 ton iron buckets from the mouth of the mine across New River on a cable where the coal was loaded on the main line of the C. & O. on the north side of New river. The company still maintains its coke ovens, 78 in number, they being supplied by two ton buckets carried over the river on a cable. The developments of the mine are conducted on the double entry system. Ventilation, however, is natural and in several sections it was only moderate. Heretofore the natural advantages in connection with this system have been very favorable for natural ventilation. The mining operations have now reached a point where it is desirable that some mechanical means of ventilation be adopted. The attention of the manager, Mr. Howald, was called to this and he agreed to take the matter up at once. The condition of haulways and working places in general was found satisfactory and apparently safe.

JOHN HOWALD, Supt.

JOHN BURNS, Mine Boss.

WRIGHT COAL AND COKE COMPANY.

No. 285.

WRIGHT MINE.

This operation is situated in Raleigh county, about 3 miles from Prince and 76 miles east of Charleston on Piney Creek, a south side tributary of the New River, and on the Piney Branch of the C. & O., which leaves the main line of the C. & O. at Prince. The Fire Creek seam is operated and is found at this point 590 feet above the railroad and 2022 feet above sea level. It is reached by an incline 1242 feet in length. The coal varies in thickness from 3 ft. to 4 ft. 8 in. and has a very good slate roof over all the mine. The grades in some sections are very irregular. There are 4 drifts situated at various distances from the drum house. The drifts are driven in distances of 400 to 600 feet. The coal is conveyed down the incline in 2 boiler shaped monitors each having a capacity of 7 long tons, these dump automatically into the bins at the foot of the incline. The equipment consists of 10 ft. drum, 1 1-4 inch rope, bins at the top and bottom of the incline of a capacity of 400 tons. The developments of the mine are conducted on the double entry system principally. The ventilation is natural and in some of the entries it is only moderate. The mine having been in operation only a short time proper arrangements have not been completed for ventilation. It being the intention of the company to install a fan as soon as connections have been made with their various entries. The drainage of the mine and condition of haulways and working places were good.

GASTON CAPERTON, Supt.

H. L. WALKER, Mine Boss.

RALEIGH COAL AND COKE COMPANY.

No. 286.

RALEIGH MINE.

This operation is in Raleigh county, on Piney Creek, about 14 miles south of Prince and by rail, 87 miles from Charleston. The No. 4 or Fire Creek seam is worked which is found at this point about 40 feet above the railroad level and 2080 feet above sea level. It varies in thickness from 3 ft. 6 in. to 6 ft. When inspected there were two separate drift openings known as the No. 1 and 2 entries which are known as the No. 1 Mine. The distance from the drift mouth to the face of the No. 1 entry is 1368 feet and the thickness of the coal 4 ft. 6 in. The distance of the drift mouth from the face of the No. 2 entry is 800 feet. In this entry a rock fault had been found which cuts the coal seam out. When visited nothing had been done to ascertain the extent of this fault. These two entries are about 3000 feet apart and are being driven in the same direction. The tippie is located about midway between the two entries and a tramroad runs to each opening. The product is hauled from two main stations one in each opening by a 10 ton electric motor, 20 mine cars per trip, each car having a capacity of 1 1-2 tons. The greater portion of the coal is mined by electric machines. The plant supplying the power for the haulage, machines and lighting and for other mechanical purposes is installed, together with the shops

about 1-2 mile from the openings near the town of Raleigh. Ventilation is produced by a high speed 5 ft. fan operated by an electric motor with direct connection. When inspected the ventilating arrangements together with the general condition of all haulways and working places found satisfactory in every respect.

T. H. BRUN, Supt.

W. S. WILLIAMS, Mine Boss.

STONEWALL COAL AND COKE COMPANY.

No. 287.

PINEY MINE.

This operation is on Piney Creek about 4 miles south of Prince and 77 miles from Charleston. The Fire Creek seam is being developed and is found at this point 495 feet above the railroad and 2000 feet above sea level. The seam where the mine openings are being made is 2 ft. 2 in. thick. The place where the plant will be is about 3-4 mile distant at which point the seam shows 4 ft. thick. A tramroad was being built at the foot of the mountain and the plane under construction. The miners' houses at this plane are at the foot of the mountain and when inspected on May 18, 1901, a number of the houses were occupied by the employes.

JOHN LEE, Supt.

LANARK FUEL COMPANY.

No. 288.

LANARK MINE.

This operation is in Raleigh county, on Piney Creek, about 5 miles from Prince. The Fire Creek seam is being developed and is found 420 feet above the railroad and 1940 feet above sea level. This place was visited May 8, 1901, The coal was 3 ft. 10 in. to 4 ft. in thickness, with a heavy slate covering. The plant will be about one mile distant from the openings and a tramroad from the openings was being constructed. The incline will be about 1000 feet long. On this lease there is about 300 acres of the Sewell seam about 300 feet above the Fire Creek which will probably be developed in the near future. Twenty miners' houses had been completed on the mountain side near the operations nearby the Beckley-Prince turnpike.

JAMES LAING, Supt.

CHAPTER XXIII.

FOURTH INSPECTION DISTRICT.

*Including the counties of*Boone,
McDowell.
Lincoln,Mercer,
Logan,Mingo,
Wyoming.

J. W. PAUL, Esq.,

CHIEF MINE INSPECTOR,

Charleston, W. Va.

SIR:—

I have the honor to submit herewith my annual report of the 4th mining district of the State for the fiscal year terminating June 30, 1901.

In it you will find contained the number of visits made to each mine. During the year there have been seven additional mines opened in McDowell county and four more leases taken. Mercer county has also seven more mine openings.

Regarding the drainage and ventilation of the mines, there is a great improvement. The fan has taken the place of the furnace, and with the system worked here, which is the double entry system, with stoppings on the main entries built with masonry of brick or stone, the ventilation is much improved, as the leakages are not nearly as great as when wooden brattices are used.

The number of fatal accidents shown by falls of roof and coal is 27. It would be interesting and instructive to know how many of these could have been avoided had proper precautions been taken. This is a matter beyond the control of the mine boss as his visits are necessarily made at intervals to the working faces and although he may often be enabled to greatly diminish the danger from this cause, by ordinary additional precautions, he cannot enforce the constant watchfulness and care throughout the mine where the roof is unsafe. I am convinced from personal observations that a large majority of these accidents is due to criminal carelessness on the part of the miner himself, and to the disinclination so frequently exhibited to undertake any additional labor that does not offer positive remuneration.

During the year I made 170 official visits to the mines in this district and frequently visited the mines to examine into the cause of fatal accidents. The number of mines and men in this district may be ascertained by consulting the table below.

Thanking you for advice and assistance received during the year, I remain.

Very respectfully yours,

WM. J. PREECE,

Inspector Fourth District.

Coaldale, W. Va., July 17, 1901.

were not ten men employed. It is not doing any good, claiming it cannot secure men.

In April it was found that this Company was putting in another drift opening and expect to do a better business.

Last visit in March when, as the furnace was not working, no inspection was made.

J. P. BEATTY, Supt.

LOGAN CONS. COAL AND COKE COMPANY.

No. 292.

LOGAN MINE.

This mine was regularly inspected three times during the year. On the last inspection the ventilation, distribution of air, general safety were fair and condition of roof, drainage of working places, condition of ropes and all machinery were good.

This company is making extensive improvements, both inside and outside of the mine. This mine is now connected with the Red Jacket Mine and the coal is taken out of whichever opening is the most feasible. Nearly a mile of tramroad has been built to the Rutherford property where the company is putting in six openings, 600 feet apart. An incline, 700 feet long, was formerly used but Jeffrey conveyors are now being used very satisfactorily, dispensing with the incline. About fifty new houses have been built for the use of both mines, Logan and Red Jacket.

S. T. LAMBERT, Supt.

W. R. WILBUR,

L. C. CHAFFINS, Mine Bosses.

LOGAN CONS. COAL AND COKE COMPANY.

No. 293.

MARITIME MINE.

This mine was regularly inspected three times during the year and visited once but owing to its being idle, caused by a strike, no inspection was made. The strike was in force during the month of June.

On an inspection made March 21, 1901, the ventilation, distribution of air, general safety were fair, and condition of roof, drainage of working places, condition of ropes and all machinery were good. This mine was in litigation for a long time but is now worked by the Logan Cons. C. & C. Co. It was formerly a machine mine but the Company took the machines to Logan and Red Jacket, but the motor is still in use for haulage. It is worked entirely now by pick.

S. T. LAMBERT, Supt.

W. HEARN, Mine Boss.

LOGAN CONS. COAL AND COKE COMPANY.

No. 294.

RED JACKET MINE.

This mine was regularly inspected three times during the year. It is located one mile above the Logan mine and is owned by the Logan Cons. C. & C. Co. Three openings have been made here, known as the Nos. 1, 2 and 3. No. 3 connects with the 8th west of the Logan Mine and

Nos. 1 and 2 connect with the main dip entry in the same mine. Coal is all mined here by machines, no pick men at all.

On an inspection made in March, 1901, the ventilation, distribution of air, general safety were fair, and condition of roof, drainage of working places, condition of ropes and all machinery were good. The power to run the machines and motor is furnished by the Logan Mine. At present the coal is brought over an incline plane, 300 feet long, but the Company is preparing to put in the Jeffrey conveyors, same as are used at Logan Mine. Part of the air in this mine is controlled by the fan at Logan, the other split goes to the furnace.

S. T. LAMBERT, Supt.

JOHN CUNNINGHAM, Mine Boss.

THACKER COAL AND COKE COMPANY.

No. 295.

THACKER MINE.

This mine was inspected in Sept., 1900, when it was found that a new furnace had been put in which gives good results. It has a shaft 40 feet deep, 8 by 10 with a stack on it 60 feet high, the grate surface at furnace is 60 feet. This Company has extended its bull wheel back one mile from drift mouth and put in a new tail rope.

It was again inspected in December when the ventilation, condition of roof, distribution of air were good, and the general safety, drainage of working places, condition of ropes and all machinery were fair. This Company has opened up a great deal of territory this last year by driving the narrow work double shift. It has had a great deal of water with which to contend but it has quite an advantage in cutting the ditches here as there is from 3 to 4 feet of impure coal below the seam being worked. A new ditch, 900 feet long with an average depth of 3 ft. 6 in. is now being cut.

A. MOORE, SUPT.

M. F. BOOTH, Mine Boss.

MINGO COAL MINING COMPANY.

No. 296.

ALMA MINE.

This mine was regularly inspected three times during the year and visited once, at which visit it was found idle and the furnace not working so no inspection was made.

Ventilation, distribution of air, general safety were fair, and condition of roof, drainage of working places, condition of ropes and all machinery were good. This company is now driving the dip entries to daylight which insures them good drainage when the robbing of the pillars is commenced and breaks the roof. A new opening is being made and it is the intention of the company to put up another tippie. Ten more houses have been built here.

J. WILLIAMS,

W. P. FARNE, Mine Bos

FRANK H. ALGER, Supts.

LYNN COAL AND COKE COMPANY.

No. 297.

LYNN MINE.

This mine was regularly inspected four times during the year. No pillars have as yet been taken out of this mine as the management is afraid to break the roof as no drainage as yet is provided for. A ditch is now being driven in a seam of coal 3 feet thick which is 20 feet below the seam being operated for drainage with a view to breaking through. The company has built quite a number of nice houses for the employes.

On an inspection made the 20th of March, 1901, the ventilation, distribution of air and general safety were fair, and the condition of the roof, drainage of working places, condition of ropes and all machinery were good.

A. MOORE, Supt.

GEO. COFFEY, Mine Boss.

GRAPEVINE COAL COMPANY.

No. 298.

GRAPEVINE MINE.

This mine was regularly inspected three times during the year. On an inspection made in March, 1901, the ventilation, distribution of air, general safety were fair, and the condition of roof, drainage of working places, condition of ropes and all machinery were good. This place is working the whole of the Thacker seam which at this place is about 12 feet thick, but there is from three to four slate partings in it. The eastern portion of the mine is now working on top of the slate which became so thick it was not profitable to take it up so the seam now being operated is from 6 feet 6 inches to 7 feet in thickness, the lower bench being left.

J. WOOLCOCK, Supt.

WM. MOORE, Mine Boss.

LOGAN CONS COAL AND COKE COMPANY.

No. 299.

LICK FORK MINE.

On an inspection made of this mine in September it was found that it had changed hands and is now controlled by the Logan Cons. C. & C. Co. Fifty new houses have been built here. The Thacker seam is being operated and at this point is at its best, the coal being 7 feet in thickness clean coal.

It was again inspected when the ventilation, condition of roof, distribution of air, general safety, drainage of working places were good, and condition of ropes and all machinery, fair. There are no improvements being made here since the last inspection except the narrow work is being pushed.

S. C. FISHER, Supt.

PEARL COAL COMPANY.

No. 300.

PEARL MINE.

This mine was regularly inspected three times during the year. This is strictly a machine mine, no pick men being employed. The floor in

this place is very irregular, which gives a great deal of trouble to the machines in cutting. The greatest trouble here is that there is a fault which runs through the lease and cuts the coal entirely out. The Company has not been able to get through this fault at any point. This pit is ventilated by a furnace and gas is used as fuel which, on the inspection made in June, was deficient. There are more men employed here than have been for years and the Superintendent was notified that there must be more air provided to which he agreed and said he would attend to it at once by building more stack and a larger pipe to the furnace.

J. BOOTH, Supt.

T. C. ELKINS, Mine Boss.

MCDOWELL COUNTY.

TIDEWATER COAL AND COKE COMPANY.

No. 301.

TIDEWATER MINE.

This mine was regularly inspected five times during the year. This is the extreme western limit of the No. 3 or Pocahontas coal seam on the railroad, the seam here goes under water. This mine makes a great deal of water and the Company is now cutting a ditch 600 feet long at an average depth of 5 feet. A 20 ft. force fan has been installed here which gives first class results. Since this fan has been running the gas has not shown up nearly so strong as it did when the fan exhausted. This mine requires careful attention as often when the shots are fired they strike feeders of gas that ignite from the shot which will fire the loose coal and create other gases. This mine had quite an experience along this line, consequently the faces of all places are now examined before quitting time. A new blacksmith shop and engine house have just been completed. The elevation of the seam at this place is 1512 feet and at Coaldale, 2336 feet. Coaldale is the highest point on the railroad and the coal crops out even with it. Coaldale is 14 miles from Tidewater by the railroad.

On an inspection made in February the ventilation, distribution of air, general safety were fair, and condition of roof, bad, and drainage of working places, condition of ropes and all machinery, good.

F. L. SCHEOW, Supt.

JAMES SAUNDERS,

HENRY L. PRICE, Mine Bosses.

FRANCIS RUDD,

C. C. VAUGHAN, Fire Bosses.

BOTTOM CREEK COAL AND COKE COMPANY.

No. 302.

BOTTOM CREEK MINE.

This mine was regularly inspected four times during the year. This mine had a fire in it recently and it required very careful attention to prevent an accident. With the little gas generated and the heat from the fire and the steam it was pretty hard to handle but everything is all right now and no one was hurt. The heat and steam cut the roof considerably. This mine still gives off a little gas but it is the duty of the

Fire Boss to examine all of the places of this mine every evening at 7 o'clock as it is supposed the fire was caused from the lighting of a feeder at back of entry when shot was fired at quitting time and not discovered until the next morning. This Company has opened up a great deal of ground inside and done practically no robbing but are about to change the method now and take out the pillars which will help the ventilation a great deal as the air now has to travel a great distance through old workings and encounters a great deal of unnecessary friction over the falls in rooms. Considerable improvement has also been made outside this year. At the tippie a new crusher, scraper line, elevators, slack bin and 15 new houses have been built. The main entry has also been relaid with new ties and heavy steel.

Ventilation, general safety, fair; condition of roof, bad; distribution of air, drainage of working places, condition of ropes and all machinery are good.

WM. SPENCER, Supt.

TOM LIGHTFOOT, Mine Boss.

MR. JACKSON, Fire Boss.

PEERLESS COAL AND COKE COMPANY.

No. 303.

PEERLESS MINE.

This mine was regularly inspected four times during the year. Ventilation, distribution of air, general safety were fair; condition of roof was bad; drainage of working places, conditions of ropes and all machinery, good. The roof at this place remains very poor. The clod of clay next to the coal which is about 12 inches comes regardless of all timber to the black slate which is from 12 to 14 inches thick and very often that comes making from 24 to 30 inches of material to handle. This Company has an air compressor and two air motors for haulage inside the mine; then the locomotive takes the trips to tippie over an outside tramroad about 1-2 mile long. Machines for cutting, run by compressed air, are also installed here but at present they are not in operation. The narrow work is being pushed here to develop the property. On an inspection made June 11, 1901, it was found that the oil law was being violated at this pit by the mine foreman and drivers by their own evidence.

L. E. TIERNEY, Supt.

WM. DEVENNY, Mine Boss.

CHARLES COONEY, Fire Boss.

EMPIRE COAL AND COKE COMPANY.

No. 304.

EMPIRE MINE.

This mine was regularly inspected three times during the year. Ventilation, distribution of air, drainage of working places and condition of ropes and all machinery were good; condition of roof, bad; general safety, fair. This Company is improving the plant very much on the inside as well as on the outside. Inside the haulways have been relaid with 56 pound steel rails on new sawed ties. The doors on cross entries have been removed and overcasts put in. The brattices are put up in good shape with stone laid in mortar. The result of this is the air crosses the face of

the work and the leakages are reduced to a minimum. On the outside 50 more houses and 134 bee-hive coke ovens, double block, are being built. An iron bridge has just been finished across Elkhorn to deliver the empty cars above the tipple. Twelve entries are now being driven to develop the property and increase the output.

W. D. ORD, Supt.

THOS. BARRETT, Mine Boss.

WM. MITCHELL, Fire Boss.

SHAWNEE COAL AND COKE COMPANY.

No. 305.

SHAWNEE MINE.

This mine has had three regular inspections made during the year. The west heading here has been driven to daylight with a view to dispensing with an outside haul of nearly a mile. An electric plant has been installed here for haulage and lighting purposes, only, at present. The motor is 10 tons, Jeffrey and 175 H. P. engine.

Ventilation, distribution of air, drainage of working places, condition of ropes and all machinery, are good; condition of roof, bad; general safety, fair. The roof in this mine is still very poor, from 20 to 24 inches of a clod comes down over most of the territory regardless of all timber.

P. P. FLANAGAN, Supt.

JAMES HORNEY, Mine Boss.

EUREKA COAL AND COKE COMPANY

No. 306.

EUREKA MINE.

Three regular inspections were made of this mine during the year. The roof at this mine does not appear to get any better. The clod next to the coal is about 2 ft. thick and comes down in most of the places; when this is down the roof is fairly good. This Company has just put in another boiler for the fan so in case any thing happens to one they can use the other as they are not connected.

Ventilation, distribution of air, general safety, drainage of working places, fair; condition of roof, bad; condition of ropes and all machinery, good. The Company is now building 86 more coke ovens, double block, which will make a total of 200.

L. E. TIERNEY, Supt.

C. HUGHES, Mine Boss.

PULASKI IRON COMPANY.

No. 307.

PULASKI MINE.

This mine was regularly inspected four times during the year. This Company is making considerable improvement both inside and outside to increase the output which, at present, is about 500 bank wagons per day. This Company is putting in a new opening known as No. 2 Mine from which opening there will be a tram-road 4750 feet long to the tipple. A new tipple is being constructed for this opening. The haulways are being relaid with new ties and 67 pound steel rails. More coke ovens and houses for the employes are being built.

Ventilation, distribution of air, drainage of working places, condition

of ropes and all machinery, good; condition of roof, and general safety were fair.

FISHER MORRIS, Supt.

ADAM LINDLEY, Mine Boss.

KEYSTONE COAL AND COKE COMPANY.

No. 308.

KEYSTONE MINE.

This mine was regularly inspected four times during the year. This mine has a clod of fire-clay from 20 to 24 inches thick next to the coal, and when the air works on it a while it cuts next to the rib and around the posts, eventually coming down; then the roof is fairly good. The main entry has been relaid with new ties and 65 pound steel rails. Since the fan has been working the gas has not shown up as strong as usual, but the narrow work is still examined with a safety lamp. An entry is now being driven to daylight which will be of great advantage to the mine. It will connect with No. 9 cross entry and act as a permanent intake. This will allow the air to travel the face of the workings, and will reduce the present friction that the intake now encounters. An opening is also being driven for haulage which will evade the heavy grades over which they are now pulling. This opening will be 15 feet lower than the present one. This is a long narrow lease, the main entry will be nearly 5 miles long when it goes through to White Oak. The Company has just finished building 15 more dwelling houses and 75 coke ovens.

Ventilation, distribution of air, general safety, drainage of working places, fair; condition of roof, bad; condition of ropes and all machinery, good.

J. K. F. STEELE, Supt.

JOHN MURRAY, Mine Boss.

JOHN MURRAY, Fire Boss.

ALGOMA COAL AND COKE COMPANY.

No. 309.

ALGOMA MINE.

This mine was inspected three times during the year. The ventilation, distribution of air, general safety, drainage of working places, fair; condition of roof, bad; condition of ropes and all machinery, good. This Company has built a brick power house and put in an electric plant consisting of two boilers, engine, generator, motor for larry and motor for fan, also one machine which cuts 7 feet deep and 44 inches wide. This mine has three openings for haulage. Nearly all of the work in this mine is pillar work. It was expected that No. 3 opening would get into better roof but up to the present it is no better. A bad feature of this roof is, there are so many kettle bottoms in it which drop out without any warning, although the Company keeps a large force of slate men on regularly to examine the roof closely but these kettle bottoms often cannot be detected till they drop out. This mine is also troubled with water in local dips and has ordered pumps for these places. This Company with Wm. Beury as Superintendent has succeeded W. H. Thomas.

WM. BEURY, Supt.

D. J. HARRY, Mine Boss.

ALGOMA COAL AND COKE COMPANY.

No. 310.

ALGOMA COALING STATION.

Ventilation, distribution of air, general safety, fair; condition of roof, bad; drainage of working places, good. This opening has been made expressly for coaling the Norfolk & Western engines. No coal is loaded here, the output just what the engines take, sometimes as few as four places are worked and at other times twelve to fourteen men are employed. This opening will eventually connect with the main workings of the Algoma Mine on North Fork.

WM. BEURY, Supt.

H. H. TAYLOR, Mine Boss.

GILLIAM COAL AND COKE COMPANY.

No. 311.

GILLIAM MINE.

This mine was regularly inspected four times during the year. Ventilation, distribution of air, drainage of working places, condition of ropes and all machinery, good; condition of roof, general safety, fair. This Company is the only operation in the Flat Top field that has a steel tippie. This Company has just put in an electric plant consisting of generator, motor, engine, tubular boilers, and has built a power house 50 by 22 feet. At present the power is only used for haulage. The roof in this mine is far better than it was. The main entry is now in good top and the cross-entries appear to all have good roof. The Company is now building 100 more coke ovens and several dwellings for the employes. The electric haulage here is quite an improvement over the locomotive and gives entire satisfaction.

P. P. FLANAGAN, Supt.

FRANK McCLOSKEY, Mine Boss.

ROLFE COAL AND COKE COMPANY.

No. 312.

ROLFE MINE.

This mine was regularly inspected three times during the year. Ventilation, distribution of air, drainage of working places, condition of ropes, and all machinery, fair; condition of roof, general safety, good. This plant has just completed the electric plant and it is in operation. The Company is building new store house, and office, 45 by 75 feet, cold storage, flour room and 25 more dwellings. Quite a great deal of trouble is being had from the surface water from the robbing of pillars. There is not much cover over the coal and the breaks have gone to the surface which lets in the water. The mine has several local dips from which the water has to be pumped till such time as the ditch can be completed.

J. E. JONES, Supt.

JAMES DEVENNY, Mine Boss.

ROANOKE COAL AND COKE COMPANY.

No. 313.

ROANOKE MINE.

This operation was regularly inspected three times during the year. The ventilation, distribution of air, fair; condition of roof, general safety,

drainage of working places, condition of ropes and all machinery, good. This mine has a splendid slate roof, in robbing the pillars and stumps a large area is required to secure a clear break as the roof is so strong. Thirty more bee-hive coke ovens have been completed here and twenty houses are being built for the employes as the Company intends to increase the output. The installation of an electric plant for haulage is now under consideration as the distance of the haul is getting too great for the mules.

A. D. RICE, Supt.

S. M. COX, Mine Boss.

INDIAN RIDGE COAL AND COKE COMPANY.

No. 314.

INDIAN RIDGE MINE.

This mine was regularly inspected three times during the year. This Company has two machines for cutting the coal but on account of so much dissatisfaction in getting machine coal loaded the Company is not running them now at all and all coal mined is pick work. This mine used to show a little gas, but since the new Capell force fan has been put in, which runs day and night, they have not been able to detect any gas with the safety lamp, although small feeders are sometimes heard and the No. 3 entry is 125 feet higher at face than the drift mouth. In January the Company store and office building was destroyed by fire but a new one is being constructed which when completed will be heated by steam and lighted by electricity. The ventilation, distribution of air, general safety, fair; condition of roof, drainage of working places, condition of ropes and all machinery, good.

C. D. BOTSFORD, Supt.

JESSE HARKWORTH, Mine Boss.

ARLINGTON COAL AND COKE COMPANY.

No. 315.

ARLINGTON MINE.

This mine was regularly inspected four times during the year. The ventilation, distribution of air, general safety, drainage of working places were found fair, and the condition of the roof, and condition of ropes and all machinery were good. This Company has just completed an electric plant, put in by the General Electric people. At present no machines are being used, and the power is only used for haulage. The motor is 10 tons Jeffrey. Fifty more coke ovens are in the course of construction.

R. PALMER, Supt.

A. GALLAGHER, Mine Boss.

GREENBRIER COAL AND COKE COMPANY.

No. 316.

GREENBRIER MINE.

This mine was regularly inspected four times during the year. The ventilation, distribution of air, general safety, drainage of working places were fair; condition of roof, condition of ropes and all machinery were good. This Company has just completed its electric plant and has it in operation. At present it is being used for haulage only and is giving

entire satisfaction. The plant consists of two boilers, 150 H. P. each; two engines, 100 H. P. each; 1 motor, 13 tons; power house, 87 by 40 feet, and the main trolley wire extends about 3,000 ft. This company is making a great many improvements inside the mine and outside. The haulways have all been relaid with new sawed ties and heavy steel. At the tippie a large slack bin, new crusher, elevators and scrapers are being installed, also 100 more bee-hive coke ovens and more houses are being built.

JAIRUS COLLINS, Supt.

JOHN MOORE, Mine Boss.

McDOWELL COAL AND COKE COMPANY.

No. 317.

McDOWELL MINE.

This mine was regularly inspected three times during the year. Ventilation, distribution of air, general safety, drainage of working places were fair; condition of roof, and condition of ropes and all machinery, good. A new opening has been put in here which connects with the tippie by a 1500 ft. tramroad outside. On one inspection the air was found close in this new opening on account of the break-throughs having been too far apart. The mine foreman detected a small per cent of gas here and he was instructed to put the break-throughs closer and have the place examined every morning before work with a safety lamp to which he agreed. The Company intends to put in another fan at the No. 2 opening and ventilate each opening separately. One hundred more coke ovens and a number of houses are being built.

T. H. COOPER, Supt.

LEVI WORKMAN, Mine Boss.

ASHLAND COAL AND COKE COMPANY.

No. 318.

ASHLAND MINE.

This mine was regularly inspected three times during the year. The ventilation, condition of roof, distribution of air, general safety, condition of ropes and all machinery, good; drainage of working places, fair. This Company takes a great deal of pride in keeping everything, both inside and outside of the mine in first class condition and has built quite a nice little village here which makes quite an inducement for the better class of laborers. This is the last opening on the North Fork branch and is the terminus of the railroad. This Company is opening a great deal of territory in the mines to supply the ovens with slack, eight double entries, driven double shift are being put in. One hundred coke ovens and fifty houses have just been completed.

S. J. O'NEIL, Supt.

J. AKERS, Mine Boss.

ELKRIDGE COAL AND COKE COMPANY.

No. 319.

ELKRIDGE MINE.

This mine was regularly inspected three times during the year. The ventilation, distribution of air, drainage of working places, and condition of ropes and all machinery were found good; the condition of the roof

is bad and the general safety, fair. This roof at the face of the narrow work going east appears to be getting a little better. This lease joins the Powhatan lease and they have a good roof there. This Company is still building more dwellings for the employes.

L. E. TIERNEY, Supt.

A. J. DALTON, Mine Boss.

LYNCHBURG COAL AND COKE COMPANY.

No. 320.

LYNCHBURG MINE.

This mine was regularly inspected four times during the year. This mine is opened on the main line of the Norfolk and Western Railroad and the opening is made at almost the highest point on the road. The cross entry that is driven out near the Upland Mine is some 40 feet lower than the drift mouth and not of uniform grade. This Company has a great deal of trouble with the drainage as there are so many local dips and a great deal of water with which to contend. Several ditches of from three to seven feet deep and from 400 to 500 feet long have been cut to aid the drainage. The entry now through the hill near the Upland opening will help them in the drainage and also give them another intake at the face of the workings. Two pumps are run and bailing is done day and night. The roof here is getting much better. The Company has built some thirty houses for employes and 87 new coke ovens. The ventilation, condition of roof, distribution of air, general safety, fair; drainage of working places, bad; condition of ropes and all machinery, good.

L. E. TIERNEY, Supt.

WM. HEATHERMAN, Mine Boss.

POWHATAN COAL AND COKE COMPANY.

No. 321.

POWHATAN MINE.

Four regular inspections were made of this mine during the year. Ventilation and distribution of air, general safety and drainage of working places, fair; the condition of roof, ropes and all machinery, good. This mine is troubled a great deal with water which comes in from the surface, especially when the pillars are removed. There is not much covering over the seam of coal and the falls frequently go to the surface. The Company is about to start upon the narrow work in the No. 2 drift and will put in another 16 ft. fan for this section of the mine and maintain two splits in the air. Fifty additional bee-hive coke ovens and several houses were constructed during the year.

L. E. TIERNEY, Supt.

WM. HEATHERMAN, Mine Boss.

UPLAND COAL AND COKE COMPANY.

No. 322.

UPLAND MINE.

This mine was given four inspections during the year, last inspection being on April 26, 1901. The ventilation and distribution of air, general safety, drainage of working places, fair; the condition of roof, condition of ropes and all machinery, good. This Company is having a great deal of trouble with surface water. A great deal of pillar work has been done

here and as the coal has a light cover over it it breaks through to the surface which admits the water. The floor of this mine is very irregular having many local dips. On the No. 10 cross entry the grade is very heavy, dipping 10 feet in 80 feet. Three electric pumps and two syphons are used in this mine. The drainage is being driven in the No. 4 seam which is 60 feet below the No. 3, which is in 900 feet. It is the intention to drive this 1700 feet in order to strike the basin when it is the intention to intercept the water from the No. 3 seam. A small electric fan is used for ventilating this adit. An electric power house 30 by 90 feet is being constructed at this mine.

J. J. LINCOLN, Supt.

H. A. FRANKINFIELD, Mine Boss.

HOUSTON COAL AND COKE COMPANY.

No. 323.

HOUSTON MINE.

When last inspected on April 22, 1901, the ventilation, distribution of air, drainage of working places, condition of ropes and all machinery were good. Condition of roof, bad. General safety of the mine, fair. This mine is troubled a great deal with local dips and water but great care has been taken of the drainage. The water is properly drained out, pumps not being used. This Company has made vast improvements inside and outside of the mine during the year. In order to establish a grade in the mine a cut 900 feet long and 6 feet deep and over 300 lineal feet of the roof taken down. During the year a large tippie has been built, together with slack bins, several houses and fifty additional coke ovens.

T. E. HOUSTON, Supt.

BEN LEWIS, Mine Boss.

CROZER COAL AND COKE COMPANY.

No. 324.

CROZER MINE NO. 1.

The ventilation, condition of roof, distribution of air, general safety of the mine, drainage of working places, condition of ropes and all machinery, good. This Company is continuing the use of stone brattices in the main entry which gives very good results. The haulways are laid with 56 pound steel rails. Four motors are used for haulage in this mine. A steel trestle from the tippie to the coke ovens, 400 feet long was completed during the year and preparations are being made to put up a steel tippie and boiler house. Eighteen new double houses for employes were built during the year.

SAMUEL EVANS, Supt.

J. R. BAILEY, Mine Boss.

CROZER COAL AND COKE COMPANY.

No. 325.

CROZER MINE NO. 2.

This mine was regularly inspected during the year, the last inspection being on April 30, 1901, when the ventilation, distribution of air, general safety, drainage of working places were fair; the condition of roof, condition of ropes and all machinery, good. The heavy rains through this

section have caused this mine to have an immense quantity of surface water with which to contend, but it has been reduced so the drains and pumps can handle it. There has been started a new drift preparatory to the operation of a new steel tippie which is under contemplation. The haulways are being laid with heavy steel rails. An electric motor will be substituted for the steam locomotive now used for haulage purposes.

SAMUEL EVANS, Supt.

GEO. GUY, Mine Boss.

TURKEY GAP COAL AND COKE COMPANY.

No. 326.

TURKEY GAP MINE.

Four regular inspections were made at this mine during the year, the last one being on April 27, 1901. This mine is working under very favorable circumstances, the grades are all in favor of the loaded cars and the drainage was good throughout the mine. The ventilation, condition of roof, distribution of air, condition of ropes and all machinery, good. When last visited 30 additional coke ovens and 20 tenement houses were under construction.

WM. McQUAIL, Supt.

JAMES HOPKINS, Mine Boss.

NORFOLK COAL AND COKE COMPANY.

No. 327.

NORFOLK MINE.

This mine was regularly inspected four times during the year, the last inspection being on May 6, 1901. Ventilation, distribution of air, condition of ropes and all machinery, good; the condition of roof, general safety, drainage of working places, fair. This Company is making a new opening near the Angle tippie which will give about one mile of tramroad to the tippie, but will dispense with an incline about 350 feet long, which is now in service. This Company is equipping a large power plant which will be made up of the following: power house, 55 by 103 feet; boiler house 33 by 105 feet; 1 Tandrem-coiles engine of 500 H. P.; 2 Bawl engines of 200 H. P. each; 1 Westinghouse direct K. W. generator; 1 Westinghouse alternate motor 300 K. W.; lights to be installed, 1800; 2 Westinghouse and 2 General Electric motors and 8 stationary motors ranging from 20 to 45 H. P.

J. E. JONES, Supt.

JAMES DEVENNY, Mine Boss.

NORFOLK COAL AND COKE COMPANY.

No. 328.

ANGLE MINE.

This mine was regularly inspected 4 times during the year, the last inspection being on May 2, 1901. This mine has suffered from surface water on account of the heavy rains and when last inspected it was not all out of the mine. A 15 ton General Electric motor is in use at this mine which gives good results. The haulways are laid with 56 pound steel. The doors in this mine were found to be in very poor condition and the air on No. 3 entry was tight on account of the condition of the doors. The Mine Boss gave the assurance that he would attend to this matter

at once. The condition of roof, distribution of air, general safety of mine, fair; drainage of working places, bad; condition of ropes and all machinery, good.

J. E. JONES, Supt.

WM. McCANN, Mine Boss.

NORFOLK COAL AND COKE COMPANY.

No. 329.

LICK BRANCH MINE.

This mine was visited on 6 different times during the year, the last inspection being made on May 3, 1901. It is the intention of the Company to put in a motor for haulage purposes in this mine as soon as the power plant is completed. The haulways are being relaid with 56 pound steel rails and sawed ties. The power house for the Norfolk, Angle, Delta and Lick Branch mines is situated between this mine and the Norfolk mine and is to furnish power for the above named collieries. The ventilation, condition of roof, distribution of air, general safety of mine, condition of ropes and all machinery, good; drainage of working places was only fair. Fifty additional dwelling houses have been built at this mine during the year.

J. E. JONES, Supt.

WM. JONES, Mine Boss.

NORFOLK COAL AND COKE COMPANY.

No. 330.

DELTA MINE.

On May 8th this mine was visited and inspected. This is a new mine and shipments have just recently begun. The ventilation was not good owing to the furnace not being completed. This furnace will be used temporarily, as it is the intention of the company to install a Capell fan at an early date. An electric motor for haulage will be used and 300 coke ovens will be constructed, as well as 100 houses. Ventilation and distribution of the air in the mine, owing to conditions cited above, were bad; the condition of roof, drainage of working places, condition of ropes and all machinery, good.

J. E. JONES, Supt.

W. H. WALTERS, Mine Boss.

SHAMOKIN COAL AND COKE COMPANY.

No. 331.

SHAMOKIN MINE.

This mine was regularly inspected on four different occasions during the year, the last inspection being made May 7, 1901. During the year this company has spent \$125,000.00 in improvements. This coal is taken from two openings, No. 1 and No. 2. At the No. 1 opening there is an incline 250 feet long. The No. 2 opening is about one mile from the No. 1 and the product from this mine is taken to the tippie on a tramroad about one mile long. A new tippie has been constructed, which is modern in all respects, having crushers, elevators and scraper line. The ventilation, condition of roof, distribution of air, general safety of mine, drainage of working places, condition of ropes and all machinery, good.

J. A. CARDWELL, Supt.

ED. STEPHEN, Mine Boss.

ELKHORN COAL AND COKE COMPANY.

No. 332.

ELKHORN MINE.

On May 9, 1901, this mine was last inspected. The ventilation, condition of roof, distribution of air, general safety of the mine, condition of ropes and all machinery, good; drainage of working places, fair. This company has a lease of 1,500 acres, which extends to the head-waters of Tug River, nearly two miles. The air course extends through this entire distance, which is used as a timber-way. This entry is laid with sawed ties and 56 pound steel rails. This company has completed a store and office building and 20 new dwelling houses and contemplate the construction of 50 additional coke ovens.

J. E. BARLOW, Supt.

J. L. HOLLIDAY, Mine Boss.

BIG FOUR COAL AND COKE COMPANY.

No. 333.

BIG FOUR MINE.

This mine is 3 miles west of Tidewater, where the No. 3 seam or Pocahontas seam goes under water level. This opening was made in the No. 4 seam, which is 60 feet above the No. 3 at this place. The No. 4 seam is nearly all cut out with faults, and when visited on April 5, 1901, the company was sinking a slope to the No. 3 coal on a 25 degree pitch. During the year this company has built a large store and office, more double and single houses.

WM. LINDSAY, Supt.

DAVID JOSEPH, Mine Boss.

BIG SANDY COAL AND COKE COMPANY.

No. 334.

BIG SANDY MINE.

This is a new mine, which is being opened in the west end of McDowell county, and when inspected, December 12, 1900, had not begun shipments.

WM. GRIFFITHS, Supt.

ALBERT TILL, Mine Boss.

DAVY-CROCKETT COAL AND COKE COMPANY.

No. 335.

DAVY MINE.

This operation is situated at Davy, and is opening the coal which measures 3 feet 3 inches in thickness. The lease covers 40 acres only and will only afford a small mine. When inspected on March 29, 1901, the ventilation, distribution of air, general safety of mine, condition of ropes and all machinery, fair; condition of roof, drainage of working places, good. The ventilation is produced by natural causes. The Inspector urged the installation of a furnace, which the company agreed to erect.

W. G. MORGAN, Supt.

A. MITCHELL, Mine Boss.

TWIN BRANCH MINING COMPANY.

No. 337.

TWIN BRANCH MINE.

This mine is about 1 mile east of Tug River operation and works the

same seam. The coal is about 3 feet 6 inches, with a good slate roof. Condition of mine on March 29, 1901, was found good in every particular.

J. E. RHODEMYER, Supt.

W. J. GILLESPIE, Mine Boss.

CAMBRIDGE COAL AND COKE COMPANY.

No. 338.

CAMBRIDGE MINE.

This is a new operation in the Davy field, on the N. & W. Ry. The coal at this place is 3 feet thick, and is a soft coking coal, but it is not definitely known the name of the seam. The elevation of the railroad is 1,100 feet and the elevation of the coal is 1,300 feet. By some it is supposed that this is the No. 6 coal. When visited on March 28, 1901, the output of this mine was about 75 tons per day. The condition of ventilation, drainage, general safety of the mine, good.

E. M. SANDS, Supt.

N. O'BRIEN, Mine Boss.

Two additional mines were opened in the west end of McDowell county, being as follows:

ANTLER COAL AND COKE COMPANY.

No. 339.

ANTLER MINE.

SHORT CREEK COAL AND COKE COMPANY.

No. 341.

SHORT CREEK MINE.

MERCER COUNTY.

MILL CREEK COAL AND COKE COMPANY.

No. 342.

MILL CREEK OR STIRLING MINE.

This mine has two openings, known as the East and West. The west side joins the Coaldale lease and entries have been driven through connecting this mine with the Coaldale mine. The mine was regularly inspected four times during the year, the last inspection being made June 1, 1901. The surface water is a source of a great deal of annoyance at this mine, since the covering frequently breaks through to the surface in the robbing of pillars. The general condition of the mine as to ventilation and drainage and general safety is good.

T. H. COOPER, Supt.

JAS. MARTIN, Mine Boss.

COALDALE COAL AND COKE COMPANY.

No. 343.

COALDALE MINE.

This mine was regularly inspected during the year, when it was found that the ventilation, distribution of air and general safety of the mine were fair; the condition of the roof, drainage of working places, condition of ropes and all machinery, good. During the year this company secured a large addition to its lease, which will give an additional mile to the underground entry. The fan in use at this mine is a 20 foot Quibal fan, but

it is the intention to replace this with a 16 foot Capell fan, which will give 250,000 cubic feet of air per minute. Two new tubular boilers have been installed at this mine and additional houses and coke ovens were constructed during the year.

T. H. COOPER, Supt.

THOS. WILLIAMS, Mine Boss.

BUCKEYE COAL AND COKE COMPANY.

No. 344.

BUCKEYE MINE.

Four regular inspections were made of this mine during the year. The general condition of the mine as to ventilation, distribution of air, general safety of the mine found to be fair, while the drainage of the working places, condition of ropes and all machinery were good. A new tippie is under construction at this mine. A great deal of surface water gets into this mine, especially during heavy rains, but it is well under control.

JOHN D. HEWITT, Supt.

THOS. GENT, Mine Boss.

CASWELL CREEK COAL AND COKE COMPANY.

No. 345.

CASWELL CREEK MINE.

Four regular inspections were made of this mine during the year. The condition of the mine as to ventilation, distribution of air, drainage of the working places, good. On June 3, 1901, an inspection was made of this mine, when it was observed that the oil and powder laws were being violated. The attention of the Superintendent and Mine Boss was called to these violations, with instructions to remedy the matter. The door on the main entry in the Hemlock side was found to be down, but the Mine Boss assured me he would have it put up at once.

GEO. FREEMAN, Supt.

THOS. GRAZEAL, Mine Boss.

BOOTH-BOWEN COAL AND COKE COMPANY.

No. 346.

RELIANCE MINE.

This mine is troubled with a great deal of surface water during rainy seasons, but the drainage of the mine is arranged so that it is under control. Four regular inspections were made of this mine during the year. The ventilation, distribution of air, general safety of the mine found to be fair. A new fan will shortly be put in at this mine.

HARRY BOWEN, Supt.

J. H. TICKLE, Mine Boss.

LOUISVILLE COAL AND COKE COMPANY.

No. 347.

LOUISVILLE MINE.

Four regular inspections were made of this mine during the year. The ventilation of the mine, distribution of air and general safety found to be fair; condition of roof, drainage of working places, condition of ropes and all machinery, good. This mine is principally pillar work, there being very little solid coal left. The company is making preparations to re-open the No. 1 Mine, which has been idle for several years. This mine

will be connected with the tipple by a tramroad 3,300 feet long. The plant is equipped with a very complete modern tipple, with crushers, scraper line and elevators.

JAIRUS COLLINS, Supt.

J. H. BRAGG,

JOHN MOORE, Mine Bosses.

GOODWILL COAL AND COKE COMPANY.

No. 348.

GOODWILL MINE.

Four regular inspections were made of this mine during the year. This Company has re-opened the east mine and is now using a locomotive for haulage purposes within it, but the old mine still uses mules for haulage. The cars run by gravity to the tipple and the mules take the empty cars into the mine. On February 25, 1901, it was found that a trip of cars had damaged a door on the main entry. The Mine Foreman was instructed to repair it at once, and it was suggested that an extra door be put in in case of either one being disabled.

PHILIP GOODWILL, Supt.

JOHN MOODY, Mine Boss.

POCAHONTAS COLLIERIES COMPANY.

No. 349.

POCAHONTAS MINE.

On June 11, 1901, this mine was last inspected, when it was found that the mine was close to the State line, and will soon be out of this State. The ventilation, distribution of air, general safety, drainage of working places, fair; condition of roof, good.

WALTER O'MALLYE, Supt.

A. J. KING, Mine Boss.

The following mines are being opened in this county:

PINNACLE COAL AND COKE COMPANY.

No. 351.

PINNACLE MINE.

CRANE CREEK COAL AND COKE COMPANY.

No. 352.

CRANE CREEK MINE.

SAGAMORE COAL AND COKE COMPANY.

No. 353.

SAGAMORE MINE.

CRYSTAL COAL AND COKE COMPANY.

No. 354.

CRYSTAL MINE.

YUKON COAL COMPANY.

No. 355.

YUKON MINE.

PART V.

CHAPTER XXIV.—DIRECTORY OF MINES.

The following table gives the names of mines, superintendents, mine bosses, seams of coal worked and number of inside employees.

DIRECTORY OF THE MINES IN THE STATE OF WEST VIRGINIA, FOR THE YEAR ENDING

JUNE 30, 1901.

No.	County.	Name of Mine.	Name of Company.	Postoffice Address.
1	Barbour.....	Junior.....	Junior Coal Co.....	Elkins.....
2	"	No. 1.....	Philippi Coal Mining Co.....	Meriden.....
3	"	Arden No. 1.....	Tygart's Valley C. & C. Co.....	Grafton.....
4	"	Laurel Hill.....	Laurel Hill Coal & Coke Co.....	Dartmoor.....
5	"	Berryburg.....	The Southern Coal & Tra's Co.....	Berryburg.....
6	"	Arden.....	Laurel Creek Coal Co.....	Arden.....
7	"	Century Shaft No. 1.....	Century Coal Co.....	Century.....
8	Brooke.....	Blanche.....	Panhandle Coal Co.....	Colliers.....
9	"	Gilchrist.....	Gilchrist Coal Co.....	Lazearville.....
10	"	Wellsburg.....	J. W. M. Carmichael.....	Wellsburg.....
11	"	Big Four.....	Brown Coal Co.....	Wheeling.....
13	Hancock.....	Marquet No. 1.....	Marquet Coal Co.....	New Cumberland..
14	"	Marquet No. 2.....	Marquet Coal Co.....	New Cumberland..
15	"	Porter No. 1 and 2.....	Cullen & Wern (Jas. Porter).....	New Cumberland..
16	Harrison.....	Worthington No. 2.....	Worthington Coal & Coke Co.....	Fairmont.....
17	"	Farnum.....	Globe Coal & Coke Co.....	Farnum.....
18	"	Pinnickinnick No. 1.....	Pinnickinnick C. & C. Co.....	Clarksburg.....
19	"	Pinnickinnick No. 2.....	Pinnickinnick C. & C. Co.....	Clarksburg.....
20	"	Farnum or No. 1.....	Briar Hill Coal & Coke Co.....	Fairmont.....
22	"	Solon or No. 9.....	Briar Hill Coal & Coke Co.....	Fairmont.....
23	"	Gypsy or No. 5.....	Briar Hill Coal & Coke Co.....	Fairmont.....
24	"	Harbert or No. 6.....	Briar Hill Coal & Coke Co.....	Fairmont.....
25	"	Maulsby or No. 7.....	Briar Hill Coal & Coke Co.....	Fairmont.....
26	"	Viropa or No. 8.....	Briar Hill Coal & Coke Co.....	Fairmont.....
27	"	Glen Falls or No. 10.....	Briar Hill Coal & Coke Co.....	Fairmont.....
28	"	Dunham or No. 11.....	Briar Hill Coal & Coke Co.....	Fairmont.....
29	"	Briar Hill Slope.....	Briar Hill Coal & Coke Co.....	Fairmont.....
30	"	Enterprise or No. 3.....	Briar Hill Coal & Coke Co.....	Fairmont.....
31	"	Howard.....	Howard Coal & Coke Co.....	Wilsonburg.....
32	"	Despard No. 2.....	Despard Gas Coal Co.....	Clarksburg.....
33	"	West Fork.....	West Fork Mining Co.....	Mt. Clare.....
34	"	Fairmore.....	Fairmont & Balto. C. & C. Co.....	Adamston.....
35	"	Lynch.....	Hutchinson Coal Co.....	Lewis.....
36	"	Dolan or No. 2.....	Hutchinson Coal Co.....	Reynoldsville.....
37	"	Ehlen.....	Hutchinson-Ehlen Coal Co.....	Shinnston.....
38	"	Ocean.....	Highland Coal & Coke Co.....	Fairmont.....
39	"	Columbia.....	Highland Coal & Coke Co.....	Fairmont.....
40	"	Riverdale.....	Riverdale Mining Co.....	Shinnston.....
41	"	Meadow Brook.....	Meadow Brook C. & C. Co.....	Meadow Brook.....
42	"	O'Neil No. 1.....	O'Neil Coal & Coke Co.....	Clarksburg.....
43	"	O'Neil No. 2.....	O'Neil Coal & Coke Co.....	Clarksburg.....
44	"	Two Lick Run.....	Two Lick Run Coal Co.....	Lewis.....
45	"	Cook.....	Cook Coal & Coke Co.....	Fairmont.....
46	"	Interstate No. 3.....	Interstate Coal Co.....	Mt. Clare.....
47	"	Lydia.....	Pursglove Bros. Coal Co.....	Wolf Summit.....
48	"	Dixie.....	Dixie Coal Co.....	Clarksburg.....
49	"	Perry.....	Perry Coal & Coke Co.....	Adamston.....
51	Marion.....	West Fairmont Shaft.....	West Fairmont C. & C. Co.....	Fairmont.....
52	"	New England.....	West Fairmont C. & C. Co.....	Fairmont.....
53	"	Gaston.....	The Gaston Gas Coal Co.....	Fairmont.....
54	"	Montana.....	Montana Coal & Coke Co.....	Fairmont.....
55	"	Aurora.....	Montana Coal & Coke Co.....	Fairmont.....
56	"	Luther.....	Mason Coal & Coke Co.....	Scottdale.....
57	"	Murray or No. 2.....	Briar Hill Coal & Coke Co.....	Fairmont.....
58	"	King.....	Virginia & Pittsburg C.&C.Co.....	Fairmont.....
59	"	Middleton.....	Middleton Coal Co.....	Monongah.....
60	"	Monongah No. 2.....	Monongah Co.....	Monongah.....
61	"	Monongah No. 3.....	Monongah Co.....	Monongah.....
62	"	Monongah No. 5.....	Monongah Co.....	Monongah.....
63	"	Monongah No. 6.....	Monongah Co.....	Monongah.....
64	"	Anderson.....	Highland Coal & Coke Co.....	Fairmont.....
65	"	Chiefton.....	Highland Coal & Coke Co.....	Fairmont.....
66	"	Highland.....	Highland Coal & Coke Co.....	Fairmont.....
67	"	Pennois.....	Pennois Coal & Coke Co.....	Fairmont.....
68	"	Worthington No. 1.....	Worthington Coal & Coke Co.....	Fairmont.....

*NAME OF SUPERINTENDENT, NAME OF MINE BOSS, SEAMS
WORKED AND THICKNESS, AND TOTAL NUMBER
OF INSIDE EMPLOYEES.*

Name of Superintendent.	Name of Mine Boss.	Name of Coal Bed Worked.	Thickness. Ft. In.	Kind of Ventilation.	Total Inside Employees.	No.
A. C. Finley.....	H. C. Haskins	Freeport...	5-0 to 5-6	fan.....	75	1
J. E. Reed.....	Walter Mathews.....	Up. Freep...	6-0	fan.....	68	2
S. D. Hoye.....	Freeport...	6-0	furnace.....	52	3
.....	Up. Freep...	5-0	fur. & shaft.....	4
Geo. F. Duck.....	David Evans.....	Pittsburg...	5-0	fan.....	146	5
W. S. Brydon.....	Freeport...	6-0	furnace.....	13	6
D. R. Gertsell.....	Wm. Francis.....	Redstone...	5-10	fan.....	50	7
W. A. Ward.....	Thos. Ritson.....	Pittsburg...	1-0	furnace.....	38	8
Elick Gilchrist.....	Wm. Gilchrist.....	Pittsburg...	4-10	furnace.....	39	9
J. W. M. Carmichael.....	Posey Cheek.....	Pittsburg...	5-0	furnace.....	24	10
Geo. K. Colborn.....	Dan. Young.....	Pittsburg...	4-10	furnace.....	17	11
Geo. Marquet.....	Wilson Holmes.....	No. 5.....	5-0	fur. & nat.....	21	13
Geo. Marquet.....	Hugh Sutherland.....	No. 5.....	5-0	fur. & nat.....	24	14
M. M. Cullen.....	Harrison Bailly.....	No. 6.....	4-6	natural.....	11	15
M. L. Hutchinson.....	C. L. Fortney.....	Pittsburg...	5-0	fan.....	68	16
A. D. Scott.....	J. H. Vernon.....	Pittsburg...	5-0	fan.....	26	17
J. H. Clifford.....	Mathew Mannix.....	Pittsburg...	5-0	fan.....	168	18
J. H. Clifford.....	Frank Flaherty.....	Pittsburg...	5-0	fan.....	19
H. H. Watson.....	P. J. McAndrews.....	Pittsburg...	5-0	natural.....	54	20
John O. Brooks.....	Thos. Jarrett, Jr.....	Pittsburg...	5-0	fan.....	40	22
John O. Brooks.....	William Jackson.....	Pittsburg...	5-0	fan.....	40	23
John O. Brooks.....	Chas. Vickers.....	Pittsburg...	5-0	fan.....	116	24
John O. Brooks.....	James Rodgers.....	Pittsburg...	5-0	fan.....	25	25
Geo. W. Fleming.....	A. H. Mitchell.....	Pittsburg...	5-0	furnace.....	47	26
H. H. Watson.....	W. B. Sims.....	Pittsburg...	5-0	fan.....	54	27
H. H. Watson.....	Robert Charlton.....	Pittsburg...	5-0	furnace.....	52	28
John O. Brooks.....	Bert Russell.....	Pittsburg...	5-0	fan.....	30	29
Geo. W. Fleming.....	S. S. Toothman.....	Pittsburg...	5-0	fan.....	140	30
John Temple.....	John Glancy.....	Pittsburg...	5-0	furnace.....	56	31
Mordecai Lewis.....	Anthony McAndrew.....	Pittsburg...	5-0	natural.....	43	32
F. H. Tibbetts.....	A. D. Mitchell.....	Pittsburg...	5-6	furnace.....	36	33
Ed. Muir.....	T. J. Westmoreland.....	Pittsburg...	5-0	fan.....	35	34
S. A. Lewis.....	J. C. Wagner.....	Pittsburg...	5-0	furnace.....	53	35
S. A. Lewis.....	Wm. Goodnite.....	Pittsburg...	5-0	furnace.....	38	36
N. Summerville.....	N. Summerville.....	Pittsburg...	5-0	fan.....	24	37
E. P. Goedecke.....	Uriah Blakesmith.....	Pittsburg...	5-0	fan.....	45	38
J. A. Sommersville.....	Oliver Banard.....	Pittsburg...	5-0	fan.....	42	39
C. F. Evans.....	Wm. Reid.....	Pittsburg...	5-6	fan.....	71	40
C. E. Hutchinson.....	P. B. Robinson.....	Pittsburg...	5-0	fan.....	90	41
John S. O'Neil.....	John Dailey.....	Pittsburg...	5-0	fan.....	50	42
John S. O'Neil.....	J. A. Jenkins.....	Pittsburg...	5-0	fan.....	50	43
Chas. Strat.....	James Hardy.....	Pittsburg...	5-0	basket.....	12	44
James T. Cook.....	John Cook.....	Pittsburg...	8-0	furnace.....	16	45
Sam Kensey.....	Sam Kensey.....	Pittsburg...	8-0	6	46
Joseph Pursglove.....	Jos. H. Pearsall.....	Pittsburg...	8-0	furnace.....	6	47
J. C. Hamilton.....	H. R. Larimer.....	Pittsburg...	8-0	furnace.....	11	48
D. C. Williams.....	Samuel Pursglove.....	Pittsburg...	8-0	fan.....	8	49
J. J. Brennen.....	Wm. Gantz.....	Pittsburg...	8-0	fan.....	178	51
C. F. Ice.....	John Thompson.....	Pittsburg...	8-0	fan.....	255	52
Geo. T. Watson.....	C. H. Tarleton.....	Pittsburg...	8-0	fan.....	165	53
C. E. Gaskill.....	W. Gaskill, R. Brown.....	Pittsburg...	8-0	fan.....	264	54
C. E. Gaskill.....	Mike Freeman.....	Pittsburg...	5-0	furnace.....	21	55
Frank Parson.....	Frank Parson.....	Pittsburg...	5-0	fan.....	28	56
J. H. Bainbridge.....	E. A. Freeman.....	Pittsburg...	5-0	fan.....	126	57
R. M. Hite.....	Wm. J. Keefe.....	Pittsburg...	5-0	fan.....	78	58
J. L. Blocker.....	P. Haley.....	Pittsburg...	5-0	fan.....	41	59
A. J. Ruckman.....	Thos. Killeene.....	Pittsburg...	8-0	fan.....	60
A. J. Ruckman.....	D. Victor, Pat Laughney.....	Pittsburg...	8-0	fan.....	669	61
A. J. Ruckman.....	Ben Morgan.....	Pittsburg...	8-0	fan.....	62
A. J. Ruckman.....	James Abercrombia.....	Pittsburg...	8-0	fan.....	63
T. S. Haymond.....	G. Coburn, J. Prunty.....	Pittsburg...	8-0	fan.....	110	64
James Stirratt.....	C. H. Brooks.....	Pittsburg...	8-0	fan.....	105	65
T. S. Haymond.....	B. E. Satterfield.....	Pittsburg...	8-0	fan.....	100	66
James Carter.....	L. E. Parker.....	Pittsburg...	8-6	fan.....	77	67
T. W. Arnett.....	Thos. Pollock.....	Pittsburg...	8-0	fan.....	85	68

DIRECTORY OF THE MINES IN THE STATE OF WEST VIRGINIA, FOR THE YEAR ENDING

JUNE 30, 1901.

No.	County.	Name of Mine.	Name of Company.	Postoffice Address.
69	Marion	Palatine.	Palatine Coal Co.	Fairmont.
70		Chatham Shaft.	George's Crk Coal & Iron Co.	Farmington.
71	Marshall	Boggs Run	Boggs Run Mining & Mfg. Co.	Wheeling.
72	"	Benwood.	Wheeling Steel & Iron Co.	Wheeling.
73	"	Glendale Shaft.	Glendale Coal Co.	Glendale.
74	"	Moundsville Shaft.	Moundsville Coal Co.	Moundsville.
75	Mineral.	Windom No. 3.	Davis Coal & Coke Co.	Savage.
76	"	Windom 4 ft.	Davis Coal & Coke Co.	Savage.
77	"	Montgomery Run.	Davis Coal & Coke Co.	Savage.
78	"	Hampshire.	Davis Coal & Coke Co.	Savage.
79	"	Savage.	Davis Coal & Coke Co.	Savage.
80	"	Windom Big Vein.	Davis Coal & Coke Co.	Savage.
81	"	Elk Garden No. 6.	W. Va. C'ntr'l & P'tsb'rg Ry. Co.	Elkins.
82	"	Smith.	Smith Coal Co.	Blaine.
83	Monongalia.	Opekiska.	Marietta Coal & Coke Co.	Opekiska.
84	"	Beechwood or No. 4.	Briar Hill Coal & Coke Co.	Fairmont.
85	Ohio.	Whitaker.	T. E. Kasley & Son.	Wheeling.
86	"	Richland.	Richland Coal Works.	Wheeling.
87	"	Elm Grove Shaft.	Elm Grove Coal Co.	Elm Grove.
88	"	La Belle.	La Belle Iron Works.	Wheeling.
89	"	Manchester.	Reyman Brewing Co.	Wheeling.
90	"	Wheeling.	Wheeling Steam Coal Co.	Wheeling.
91	"	Central.	Jochum & Co.	Wheeling.
93	Preston.	Austen.	Austen Coal & Coke Co.	Austen.
94	"	Mt. Brook Shaft.	Newburg Coal & Coke Co.	Newburg.
95	"	West End.	Gorman Coal & Coke Co.	Austen.
97	"	Irona.	Irona Coal Co.	Kingwood.
98	"	Tunnelton.	Merchants Coal Co.	Tunnelton.
99	"	Oakland.	Oakland Coal & Coke Co.	Corinth.
100	"	Howesville No. 1.	Kingwood Coal Co.	Howesville.
101	"	Dixie.	Hite Coal & Coke Co.	Newburg.
102	"	Vulcan.	Orr Coal & Coke Co.	Newburg.
102A	"	Imperial.	Imperial Coal & Coke Co.	Victoria.
103	Taylor.	Sandlick.	Grafton Coal & Coke Co.	Grafton.
105	"	Flemington.	Flemington Coal & Coke Co.	Flemington.
106	"	Tyrconnell.	Colonial Coal & Coke Co.	Tyrconnell.
107	"	Foster.	B. F. Radabaugh & Co.	Simpson.
108	"	New York.	Davis Coal & Coke Co.	Simpson.
109	"	Rosemont.	Rosemont Coal Co.	Grafton.
111	Tucker.	Douglas No. 1.	Cumberland Coal Co.	Albert.
112	"	Douglas No. 3.	Cumberland Coal Co.	Albert.
113	"	Thomas Drift.	W. Va. C'ntr'l & Pitts Ry. M. Dpt	Thomas.
114	"	Thomas Shaft.	W. Va. C'ntr'l & Pitts Ry. M. Dpt	Thomas.
115	"	Thomas No. 3.	W. Va. C'ntr'l & Pitts Ry. M. Dpt	Thomas.
116	"	Coketon No. 1.	W. Va. C'ntr'l & Pitts Ry. M. Dpt	Coketon.
117	"	Coketon No. 2.	W. Va. C'ntr'l & Pitts Ry. M. Dpt	Coketon.
118	"	Coketon No. 3.	W. Va. C'ntr'l & Pitts Ry. M. Dpt	Coketon.
119	Grant.	Henry Shaft.	W. Va. C'ntr'l & Pitts Ry. M. Dpt	Henry.
120	Randolph.	Randolph.	F. F. Rease.	Belington.
121	"	Harding.	Junior Coal Co.	Elkins.
122	"	Weaver.	Maryland Smokeless Coal Co.	Belington.
123	Kanawha.	Jones Bank.	Falling Rock Cannel Coal Co.	Jordan.
124	"	Graham Mines.	J. G. Vaug'n & Co for Gra'm C. Co.	Graham Mines.
125	"	Queen Shoals.	Elk River Colliery Co.	Columbus.
125A	"	Sycamore.	G. T. Tyler.	Graham Mines.
126	"	Spring Fork.	Campbells Creek Coal Co.	Malden.
127	"	New Mine.	Campbells Creek Coal Co.	Malden.
128	"	Diamond.	New Diamond Coal Co.	Diamond.
129	"	Quincy.	Quincy Coal Co.	Quincy.
130	"	Peabody.	Peabody Coal Co.	Shrewsbury.
131	"	Monarch.	Victor Coal Co.	Monarch.
132	"	Virginia.	Virginia Mining Co.	Cedar Grove.
133	"	Schoolfy.	Big Mountain Mining Co.	Cedar Grove.
134	"	Drum House.	Big Mountain Mining Co.	Cedar Grove.
135	"	C. No. 2.	Kelly's Creek Mining Co.	Mammoth.

*NAME OF SUPERINTENDENT, NAME OF MINE BOSS, SEAMS
WORKED AND THICKNESS, AND TOTAL NUMBER
OF INSIDE EMPLOYES.*

Name of Superintendent.	Name of Mine Boss.	Name of Coal Bed Worked.	Thickness. ft. in.	Kind of Ventilation.	Total Inside Employees.	No.
M. D. Orr.....	J. C. McKenney.....	Pittsburg..	9-0	natural.....	38	69
R. L. Somerville	W. J. Lloyd.....	Pittsburg..	8-0	fan	56	70
Philip King.....	Eugene Miller.....	Pittsburg..	5-6	fan	52	71
Patrick Brannon.....	Peter O'Malley.....	Pittsburg..	5-6	furnace	37	72
F. H. Blake.....	J. E. Wallace.....	Pittsburg..	6-0	fan	103	73
J. W. Berry.....	E. C. Pickett.....	Pittsburg..	6-0	fan	94	74
O. Tibbets.....	Jas. B. Rankin.....	Elk Lick ..	4-0	natural.....	11	75
O. Tibbets.....	Jas. B. Rankin.....	Tyson	5-10....	natural.....	52	76
O. Tibbets.....	Jas. B. Rankin.....	Pittsburg..	5-10....	fan	23	77
O. Tibbets.....	John Rowland.....	6 ft.....	5-10....	fan	98	78
O. Tibbets.....	Peter Messenger.....	Elk Lick ..	3-9	fan	91	79
O. Tibbets.....	Jas. B. Rankin.....	Pittsburg..	12-0....	natural.....	33	80
W. T. Blackiston.....	F. Wilson.....	Pittsburg..	12-0....	natural.....	282	81
R. A. Smith.....	H. B. Smith.....	6 ft.....	6-0	furnace	14	82
John Hunker.....	Mike Calloghan.....	Pittsburg..	7-6	furnace	37	83
W. W. Ferguson.....	S. M. Ferrell.....	Pittsburg..	8-0	natural.....	45	84
W. H. Kasiey.....	Wm. Magruder.....	Pittsburg..	5-0	fan	20	85
Robert Gilchrist.....	John Aitken.....	Pittsburg..	5-0	furnace	47	86
Wm. Chambers, Jr.....	John Costellow, Jr.....	No. 8.....	6-0	fan	69	87
W. H. Travis.....	Christian Baker.....	Pittsburg..	4-0	furnace	88
Chas. Smith.....	John Reynolds.....	Pittsburg..	5-0	fan	12	89
J. C. McKinley.....	Geo. Bearum.....	Pittsburg..	5-2	furnace	33	90
John Jochum.....	furnace	5	91
F. W. Horchler.....	J. R. Cook.....	Up-Freep't	4-6	fan	60	92
.....	Robert Benine.....	Up-Freep't	4-6	fan	44	94
Robert Magraw.....	Mike Sullivan.....	Up-Freep't	4-2	furnace	52	95
Fred C. Todd.....	John Henry.....	Up-Freep't	4-10....	fan	78	97
Joseph Miller.....	W. F. Harvey.....	Up-Freep't	4-10....	fan	179	98
R. I. Anderson.....	Richard Jenkins.....	Up-Freep't	4-0	natural.....	19	99
E. E. Evans.....	E. E. Evans.....	Up-Freep't	4-10....	furnace	10	100
John Y. Hite.....	Alf. Fortney.....	Up-Freep't	4-4	furnace	17	101
J. M. Orr.....	W. G. Deahl.....	Up-Freep't	4-6	furnace	35	102
M. C. Courtney.....	John F. Bratt.....	Lo. Kitt'ing	5-0	fan	24	102A
John W. Fahey.....	M. Naughton.....	Pittsburg..	7 0	natural.....	58	103
J. W. Davidson.....	T. C. Anderson.....	Pittsburg..	9-0	fan	258	105
R. B. Gordon.....	Robert Love.....	Pittsburg..	8-6	natural.....	100	106
B. F. Radabaugh.....	W. L. Davis.....	Pittsburg..	7-6	natural.....	15	107
L. B. Brydon.....	W. M. Drainer.....	Pittsburg..	7-6	furnace	102	108
J. W. Fahey.....	Frank Savage.....	Pittsburg..	8 0	natural.....	83	109
J. B. Jenkins.....	Geo. Jenkins.....	Lo. Kitt'ing	6-0	fan	130	111
J. B. Jenkins.....	David Harr.....	Lo. Kitt'ing	6-0	fan		112
Lee Ott.....	Wm. Barracks.....	Up-Freep't	7-6	fan	407	113
Lee Ott.....	J. B. Boyd.....	Lo. Kitt'ing	6-0	fan	133	114
Lee Ott.....	J. E. Ott.....	Up-Freep't	7-6	heated air..	38	115
J. C. Brydon.....	A. G. Smith.....	Lo. Kitt'ing	6-0	fan	51	116
J. C. Brydon.....	A. G. Smith.....	Lo. Kitt'ing	3-6	fan	110	117
J. C. Brydon.....	C. H. Bice.....	Lo. Kitt'ing	6-0	fan	152	118
B. S. Phillips.....	Up-Freep't	7-6	119
F. P. Rease.....	R. D. Edwards.....	Up-Freep't	7-0	furnace	67	120
A. C. Finley.....	J. M. Davis.....	Freeport...	8-6 to 9-0	fan	68	121
Geo. C. Lee.....	Alfred Jenkins.....	Kittanning	9-0	2 shafts.....	91	122
L. W. Couch.....	N. C. Posten.....	Cannel.....	2-6	fan	12	123
W. W. Graham.....	E. G. Archibald.....	6 ft.....	5-0	natural.....	29	124
W. H. Atchinson.....	G. D. Young.....	No. 5.....	4-6	furnace	150	125
Geo. T. Tyler.....	6 ft.....	6-0	natural.....	4	125A
J. E. Dana.....	W. B. Calderwood.....	CampblsCr	3-6	furnace	45	126
J. E. Dana.....	W. B. Calderwood.....	CampblsCr	4-4	fan & furn..	131	127
Arthur Robinson.....	James Arrington.....	Winifrede ..	4-0	natural.....	52	128
Wm. Dickinson.....	J. M. Kelley.....	Lewiston ..	3-4	furnace	23	129
J. A. Carter.....	J. J. Neylan.....	Big Seam....	6-6	natural.....	72	130
P. F. Spruce.....	H. T. Tucker.....	Cedar Gro'e	3-0	furnace	31	131
Henry Davis.....	B. F. Hull.....	Cedar Gro'e	2-9	furnace	77	132
Henry Davis.....	J. W. Green.....	Coalburg....	4-0 to 6-5	fan	66	133
Henry Davis.....	J. W. Green.....	Coalburg....	4-0 to 6-5	fan		134
J. W. Dawson.....	Wm. Shannon.....	No. 3.....	6-0	fan	113	135

*DIRECTORY OF THE MINES IN THE STATE OF WEST VIRGINIA, FOR THE YEAR ENDING
JUNE 30, 1901.*

No.	County.	Name of Mine.	Name of Company.	Postoffice Address.
136	Kanawha	C No. 3.	Kellys Creek Coal Min. Co.	Mammoth
137	"	D No. 4.	Kellys Creek Coal Min. Co.	Mammoth
138	"	B No. 4.	Kellys Creek Coal Min. Co.	Mammoth
139	"	E No. 5.	Kellys Creek Coal Min. Co.	Mammoth
140	"	Drum House.	Cedar Grove Colliery Co.	Cedar Grove.
141	"	Sunnyside.	Cedar Grove Colliery Co.	Cedar Grove.
142	"	No. 5.	Cedar Grove Colliery Co.	Cedar Grove.
143	"	Riverside.	Riverside Coal Co.	Riverside.
144	"	Cannelton No. 1.	Cannelton Coal Co.	Cannelton
145	"	Cannelton No. 2.	Cannelton Coal Co.	Cannelton.
146	"	Charlmore.	New Charlmore Coal Co.	Hernshaw.
147	"	Marmet No. 1.	The Marmet Co.	Marmet.
148	"	Marmet No. 2.	The Marmet Co.	Marmet.
149	"	"B" Drift.	The Marmet Co.	Marmet.
150	"	Arbuckle.	Winifrede Coal Co.	Winifrede.
151	"	North Pick.	Winifrede Coal Co.	Winifrede.
152	"	South.	Winifrede Coal Co.	Winifrede.
153	"	North Machine.	Winifrede Coal Co.	Winifrede.
154	"	Ronda.	Coalburg Colliery Co.	Ronda.
155	"	Acme.	Stevens Coal Co.	Acme.
156	"	Keystone.	Stevens Coal Co.	Acme.
157	"	Empire.	Stevens Coal Co.	Acme.
158	"	Pine Grove.	Pine Grove Coal Co.	Coalburg.
159	"	Klondike.	Rob'son C.Co., G.W.M'Clitic, R	Coalburg.
160	"	Coalburg No. 4.	Rob'son C.Co., G.W.M'Clitic, R	Coalburg.
162	"	Chestnut Point.	East Bank Coal & Coke Co.	East Bank.
163	"	Lewiston (Black Cat).	Kanawha Coal & Min. Co.	Crown Hill.
164	"	Coalburg (Black Cat).	Kanawha Coal & Min. Co.	Crown Hill.
165	"	Belmont (Coalburg).	Belmont Coal Co.	Crown Hill.
166	"	Belmont (Lewiston).	Belmont Coal Co.	Crown Hill.
167	"	Crown Hill (Kanawha).	Crown Hill Coal Co.	Crown Hill.
168	"	Crown Hill (Coalburg).	Crown Hill Coal Co.	Crown Hill.
169	"	Crown Hill (Lewiston).	Crown Hill Coal Co.	Crown Hill.
170	"	Chesapeake No. 1.	Chesapeake Mining Co.	Handley.
171	"	Chesapeake No. 2.	Chesapeake Mining Co.	Handley.
172	"	Consolidated.	Montgomery Coal Co.	Montgomery.
173	"	Mt. Morris.	Montgomery Coal Co.	Montgomery.
174	"	Lewiston.	Montgomery Coal Co.	Montgomery.
175	"	Sharpe.	Sharpe Coal Co.	Chilton.
176	"	Lewiston.	Lewiston Coal Co.	Lewiston.
177	"	Scranton.	Scranton Splint Coal Co.	Dego.
178	Mason	Camden.	Camden Clay Co.	Spilman.
179	"	Hope.	Hope Salt & Coal Co.	Mason.
180	"	Mason.	Mason City Mining Co.	Mason.
181	"	Jackson Furnace.	Liverpool Salt & Coal Co.	Hartford.
182	"	Hartford.	Hartford Salt & Coal Co.	Hartford.
183	"	New Castle.	Consumers Coal & Min. Co.	Spilman.
184	"	Black Diamond.	Thos. Harris.	Hartford.
185	"	Klondike.	Klondike Coal Co.	Hartford.
186	Putnam	Plymouth.	Plymouth Coal & Mining Co.	Plymouth.
187	"	Florence.	Marmet-Smith Coal & Min. Co.	Raymond City.
188	"	Pocatalico.	Marmet-Smith Coal & Min. Co.	Raymond City.
189	Fayette	Longacre No. 2.	Longacre Colliery Co.	Longacre.
190	"	Longacre No. 1.	Longacre Colliery Co.	Longacre.
192	"	Harewood No. 2.	W. R. Johnson & Co.	Harewood.
193	"	Boomer No. 1.	Boomer Coal & Coke Co.	Boomer.
194	"	Gauley.	Falls Colliery Co.	Ferris.
195	"	Eureka No. 5.	Davis-Gordon Co.	Montgomery.
196	"	Eureka No. 2.	Davis-Gordon Co.	Montgomery.
197	"	Mecca Gas No. 2.	Mecca Coal & Coke Co.	Montgomery.
198	"	Mecca No. 5 Splint.	Mecca Coal & Coke Co.	Montgomery.
199	"	Straughan.	C.Val.M. Co., J.W.Straughan, R	Montgomery.
200	"	No. 1 Eagle.	W. R. Johnson.	Crescent.
201	"	No. 2 Gas.	W. R. Johnson.	Crescent.
202	"	No. 5.	W. R. Johnson.	Crescent.

*NAME OF SUPERINTENDENT, NAME OF MINE BOSS, SEAMS
WORKED AND THICKNESS, AND TOTAL NUMBER
OF INSIDE EMPLOYEES.*

Name of Superintendent.	Name of Mine Boss.	Name of Coal Bed Worked.	Thickness. ft. in.	Kind of Ventilation.	Total Inside Employees.	No.
J. W. Dawson.....	Wm. Shannon.....	Lewiston.....	4-6	fan	29	136
J. W. Dawson.....	John Holden.....	Coalburg.....	5-0	fan	45	137
J. W. Dawson.....	W. H. Mease.....	Coalburg.....	5-0	fan	116	138
J. W. Dawson.....	Wm. Shannon.....	No. 5.....	6-6	fan	38	139
J. D. Harris.....	Charles Armstrong.....	Ced'r Gr'Ve.....	5-6	fan	14	140
J. D. Harris.....	Charles Armstrong.....	Ced'r Gr'Ve.....	5-6	natural	34	141
J. D. Harris.....	Charles Armstrong.....	Ced'r Gr'Ve.....	5-6	fan	34	142
Carl Sholtz.....	J. S. Miller.....	Ced'r Gr'Ve.....	3-0	fan	116	143
Langdon Lea.....	Cannel.....	144
Langdon Lea.....	Robert Taylor.....	Kana. Gas.....	6-11.....	fan	230	145
Okey Meadows.....	Edward Jackson.....	Lens Cr'k.....	3-4	furnace.....	48	146
L. W. Atkinson.....	J. W. Noble.....	Coalburg.....	3-3	furnace.....	65	147
L. W. Atkinson.....	J. W. Noble.....	Coalburg.....	3-3	furnace.....	61	148
L. W. Atkinson.....	J. W. Noble.....	Coalburg.....	3-3	furnace.....	14	149
R. B. Cassady.....	Geo. Cooper.....	Winfd Gas.....	3-0	natural.....	6	150
R. B. Cassady.....	James Morgan.....	Winfd Gas.....	3-0	furnace.....	12	151
R. B. Cassady.....	James Morgan.....	Winifrede.....	5-0	fan	138	152
R. B. Cassady.....	James Morgan.....	Winifrede.....	5-0	2 fans.....	187	153
J. W. Moore.....	James A. Turner.....	Coalburg.....	7-6	furnace.....	78	154
E. H. Shonk.....	W. H. Morris.....	Lo. Freeprt.....	4-6	fan	143	155
E. H. Shonk.....	J. S. Holmes.....	Lo. Kitt'ing.....	5-6	fan	93	156
E. H. Shonk.....	M. Crawford.....	Lo. Kitt'ing.....	5-6	furnace.....	38	157
John Peacock.....	Wm. Curry.....	Ced'r Gr'Ve.....	3-8	natural.....	23	158
W. L. Wooldridge.....	James Murray.....	Ced'r Gr'Ve.....	2-8	furnace.....	26	159
W. L. Wooldridge.....	R. G. Poff.....	Lo. Freeprt.....	5-8	furnace.....	49	160
P. L. Brannon.....	P. L. Brannon.....	Ced'r Gr'Ve.....	3-0	fan	43	162
C. A. Jewell.....	D. B. Howery.....	Lewiston.....	3-8	fan	62	163
C. A. Jewell.....	D. B. Howery.....	Coalburg.....	3-8	fan	14	164
T. E. Embleton.....	P. H. Embleton.....	Coalburg.....	3-0	fan	50	165
T. E. Embleton.....	P. H. Embleton.....	Lewiston.....	4-0	furnace.....	68	166
C. A. Jewell.....	Ed. Hope.....	Kanawha.....	4-2	fan	40	167
C. A. Jewell.....	J. W. Nugen.....	Coalburg.....	4-2	natural.....	15	168
C. A. Jewell.....	J. W. Nugen.....	Lewiston.....	4-0	natural.....	12	169
J. B. Lewis.....	Alex. Thompson.....	Kanawha.....	3-6 to 6-6	fan	182	170
J. B. Lewis.....	Alex. Thompson.....	Kanawha.....	3-6 to 6-6	fan		171
S. H. Montgomery.....	Wm. Tamplin.....	Kanawha.....	4-0	natural.....	62	172
S. H. Montgomery.....	Wm. Tamplin.....	Kanawha.....	4-0	natural.....	24	173
S. H. Montgomery.....	Wm. Tamplin.....	Lewiston.....	3-10	natural.....	3	174
Frank Sharpe.....	H. S. Myers.....	Black Band.....	3-0	furnace.....	7	175
E. M. McConihay.....	Jas. Coleman.....	Peerless.....	2-6	furnace.....	18	176
Wm. Mucklow.....	Wm. Mucklow.....	Coalburg.....	5-0	furnace.....	35	177
M. G. Tyler.....	J. E. Armstrong.....	Pittsburg.....	4-0	furnace.....	11	178
D. C. Davis.....	Henry Williams.....	Pittsburg.....	4-6	furnace.....	23	179
G. W. Gress.....	W. L. Harris.....	Pittsburg.....	5-6	natural.....	45	180
H. T. Smith.....	Samuel Edwards.....	Pittsburg.....	4-6	fan	22	181
D. E. Newton.....	Richard Jenkins.....	Pittsburg.....	4-6	fan	24	182
Mack Rollins.....	James Vanmeter.....	Pittsburg.....	4-6	furnace.....	77	183
Thos. Harris.....	Frank Carvender.....	Pittsburg.....	4-6 to 5-0	shaft	8	184
Chas. E. Pierce.....	Pittsburg.....	4-6	furnace.....	20	185
W. A. Carver.....	James Carver.....	Pittsburg.....	6-0	fan	160	186
Ed. Schonebaum.....	Lewis Travillion.....	Pittsburg.....	5-8	furnace.....	242	187
Ed. Schonebaum.....	James Lloyd.....	Pittsburg.....	5-8	2 furnaces.....	36	188
Fred Dixon.....	Raymond Hurd.....	Cl'r'n or Egl.....	4-8	fan	41	189
Fred Dixon.....	Ed. Littlejohn.....	Kittanning.....	5-0	fan	35	190
James Lovell.....	John Akers.....	No. 2 Gas.....	5-10	furnace.....	79	192
Ed. Coxey.....	W. B. Welch.....	Coal Valley.....	5-6	fan	83	193
J. Pritchard.....	J. W. Stranghan.....	No. 2 Gas.....	4-6	fur & stack.....	35	194
Geo. Frasier.....	Robt. Thompson.....	No. 5 Block.....	6-4	natural.....	72	195
Geo. Frasier.....	John Frasier.....	No. 2 Gas.....	4-11	fan	83	196
John Carver.....	John Tasker.....	No. 2 Gas.....	5-0	fan	40	197
John Carver.....	John Tasker.....	No. 5 Block.....	7-0	fan	90	198
J. W. Straghan.....	W. G. Mason.....	Eagle No. 1.....	4-0	furnace.....	41	199
Thos. A. Bartlam.....	L. M. Waters.....	Eagle No. 1.....	3-4	fan	28	200
Thos. A. Bartlam.....	James Giles.....	Gas No. 2.....	5-0	fan	34	201
Thos. A. Bartlam.....	John Kirby.....	No. 5 Block.....	6-6	natural.....	82	202

*DIRECTORY OF THE MINES IN THE STATE OF WEST VIRGINIA, FOR THE YEAR ENDING
JUNE 30, 1901.*

No..	County.	Name of Mine.	Name of Company.	Postoffice Address.
203	Fayette.....	Edgewater No. 4.....	Carver Brothers Co.	Eagle.....
204	"	Edgewater No. 2.....	Carver Brothers Co.....	Eagle.....
205	"	Edgewater No. 3.....	Carver Brothers Co.....	Eagle.....
206	"	No. 5.....	Carver Brothers Co.....	Eagle.....
207	"	No. 1.....	Carver Brothers Co.....	Eagle.....
208	"	Eagle.....	Carver Brothers Co.....	Eagle.....
209	"	St. Clair No. 1.....	The St. Clair Co.....	Eagle.....
210	"	St. Clair No. 2.....	The St. Clair Co.....	Eagle.....
211	"	Forest Hill.....	The St. Clair Co.....	Eagle.....
212	"	Diamond.....	J. F. Burdett.....	Mt. Carbon.....
213	"	Excelsior.....	Mt. Carbon Colliery Co., L't'd	Powellton.....
214	"	Vulcan.....	Mt. Carbon Colliery Co., L't'd	Powellton.....
215	"	Digby.....	Gt. Kanawha Colliery Co., Ld	Mt. Carbon.....
216	"	No. 1.....	Gt. Kanawha Colliery Co., Ld	Mt. Carbon.....
217	"	No. 5 Block.....	Gt. Kanawha Colliery Co., Ld	Mt. Carbon.....
218	"	Nova Scotia.....	Gauley Mountain Coal Co.....	Ansted.....
219	"	Rich Creek.....	Gauley Mountain Coal Co.....	Ansted.....
220	"	Gaymont.....	D.S. Cook & Sun Coal & Ck Co.	Hawk's Nest.....
221	"	Sunnyside.....	Victoria Coal & Coke Co.....	Sunnyside.....
222	"	Elmo.....	New River Mining Co.....	Elmo.....
223	"	Michigan.....	Michigan Coal Co.....	Fayette.....
224	"	Fayette.....	Low Moor Iron Co.....	Fayette.....
225	"	Kaymoor.....	Low Moor Iron Co.....	Nuttallburg.....
226	"	Nuttallburg.....	Nuttallburg Coal & Coke Co.....	Nuttallburg.....
227	"	Newlyn.....	Newlyn Coal & Coke Co.....	Fayette.....
228	"	Keeney's Creek.....	Nuttallburg Coal & Coke Co.....	Nuttallburg.....
229	"	Brown.....	Brown Coal Co.....	Nuttallburg.....
230	"	Boone.....	Boone Coal & Coke Co.....	Boone.....
231	"	Ballinger No. 1.....	Ballinger Coal & Coke Co.....	Nuttallburg.....
232	"	Ballinger No. 2.....	Ballinger Coal & Coke Co.....	Nuttallburg.....
233	"	Blume.....	Blume Coal & Coke Co.....	Lookout.....
234	"	Lookout.....	Blume Coal & Coke Co.....	Lookout.....
235	"	Smokeless.....	Smokeless Coal & Coke Co.....	Winona.....
236	"	Dubree.....	Rothwell Coal Co.....	Nuttallburg.....
237	"	Quarrier.....	Rothwell Coal Co.....	Nuttallburg.....
238	"	North Caperton.....	Victoria Coal & Coke Co.....	Caperton.....
239	"	South Side.....	Victoria Coal & Coke Co.....	Caperton.....
240	"	Chapman.....	Chapman Coal & Coke Co.....	Elverton.....
241	"	Cliff Top.....	Longdale Iron Co.....	Sewell.....
242	"	Cunard.....	Cunard Coal Co.....	Rush Run.....
243	"	Brooklyn.....	Brooklyn Coal Co.....	Rush Run.....
244	"	Fire Creek.....	Fire Creek Coal & Coke Co.....	Fire Creek.....
245	"	Central No. 1.....	Central Coal Co.....	Fire Creek.....
246	"	Central No. 2.....	Central Coal Co.....	Fire Creek.....
247	"	Echo.....	Echo Coal & Coke Co.....	Beury.....
248	"	Rush Run.....	Rush Run Coal & Coke Co.....	Rush Run.....
249	"	Red Ash.....	Red Ash Coal Co.....	Rush Run.....
250	"	Thurmond.....	The Thurmond Coal Co.....	Thurmond.....
252	"	Stone Cliff.....	Beury Coal & Coke Co.....	Stone Cliff.....
253	"	Big Bend.....	Big Bend Coal Co.....	Dimmock.....
254	"	Beechwood & Keysto'e	Beechwood Coal & Coke Co.....	Claremont.....
255	"	Alaska.....	Alaska Coal & Coke Co.....	Claremont.....
256	"	Slater.....	New River Colliery Co.....	Thayer.....
257	"	Ephraim Creek.....	Ephraim Creek Coal & Ck Co	Coit.....
258	"	Harvey No. 1.....	Harvey Coal & Coke Co.....	Bissell.....
259	"	Harvey No. 2.....	Harvey Coal & Coke Co.....	Bissell.....
260	"	Star.....	Star Coal & Coke Co.....	Red Star.....
261	"	Collins No. 1.....	Collins Colliery Co.....	Glen Jean.....
262	"	Collins No. 2.....	Collins Colliery Co.....	Glen Jean.....
263	"	Sun.....	Sun Coal & Coke Co.....	Sun.....
264	"	Kilsyth.....	McKell Coal & Coke Co.....	Glen Jean.....
265	"	Dunloop No. 1.....	Dunn Loop Coal & Coke Co.....	Dunloop.....
266	"	Dunloop No. 2.....	Dunn Loop Coal & Coke Co.....	Dunloop.....
267	"	Turkey Knob.....	Turkey Knob Coal Co.....	Macdonald.....
268	"	Macdonald.....	Macdonald Colliery Co.....	Macdonald.....

*NAME OF SUPERINTENDENT, NAME OF MINE BOSS, SEAMS
WORKED AND THICKNESS, AND TOTAL NUMBER
OF INSIDE EMPLOYEES.*

Name of Superintendent.	Name of Mine Boss.	Name of Coal Bed Worked.	Thickness. Ft. In.	Kind of Ventilation.	Total Inside Employees	No.
Enoch Carver.....	John E. Carver.....	Gas No. 2.....	4-0	fan.....	96	203
Enoch Carver.....	John E. Carver.....	Gas No. 2.....	5-6	fan.....		204
Enoch Carver.....	John E. Carver.....	Gas No. 2.....	4-0	fan.....		205
Enoch Carver.....	John Thurmond.....	No. 5 Block.....	7-6	fan.....		68 206
Enoch Carver.....	Walter Culbertson.....	Eagle No. 1.....	4-6	fan.....		35 207
Enoch Carver.....	Wm. Knight.....	Eagle No. 1.....	4-0	fan.....	40	208
A. P. Shearer.....	Thos. Loyd.....	Eagle No. 1.....	4-0	fan.....	57	209
A. P. Shearer.....	Jos. Richardson.....	Gas No. 2.....	5-0	fan.....	40	210
A. P. Shearer.....	J. Smoot.....	Gas No. 2.....	5-0	furnace.....	40	211
J. F. Burdett.....	Joseph Pirrung.....	Gas No. 2.....	4-8	fan.....	60	212
D. T. Evans.....	John I. Absalom.....	Eagle No. 1.....	4-0	natural.....	24	213
D. T. Evans.....	John I. Absalom.....	Powellton.....	5-10	fan and nat	147	214
Wm. Brown.....	Thos. Toney.....	Gas No. 2.....	3-6	natural.....	77	215
Wm. Brown.....	John Holmes.....	Gas No. 2.....	3-6	fan.....	114	216
Wm. Brown.....	John Holmes.....	No. 5 Block.....	6 to 7-0	natural.....	26	217
Wm. N. Page.....	James Martin.....	Gas No. 2.....	4-4 to 6-6	fire baskets	326	218
Wm. N. Page.....	D. S. Dooley.....	Gas No. 2.....	6-0	fan and nat		219
Theodore Dietz.....	H. B. Pollock.....	Sewell.....	3-0	furnace.....		56 220
J. Blackburn.....	Thos. Bannister.....	Sewell.....	3-0	furnace.....		37 221
T. C. Beury.....	Jas. Grissinger.....	Sewell.....	3-6	fan.....		55 222
Jas. Boone.....	Val. Backman.....	Sewell.....	3-0	furnace.....	62	223
James Kay.....	A. N. Pitman.....	Sewell.....	3-8	fan.....	52	224
James Kay.....	J. C. Eastham.....	Sewell.....	3-8	fan.....		225
Fred R. Raven.....	James W. Sims.....	Sewell.....	3-8	fan.....		81 226
Ed. Thomas.....	H. P. Thomas.....	Sewell.....	3-6	natural.....	28	227
Fred R. Raven.....	J. W. Small.....	Sewell.....	3-6	natural.....	56	228
John A. Boone.....	Philip Graef.....	Sewell.....	4-0	furnace.....	96	229
Francis Boone.....	Mike Zwilling.....	Sewell.....	3-8	furnace.....	69	230
Geo. Holland.....	John Ohlinger.....	*Nutor Sew	3-10	furnace.....	72	231
Geo. Holland.....	Albert Ohlinger.....	*Nutor Sew	3-10	natural.....	30	232
D. W. Boone.....	Thos. Stead.....	*Nutor Sew	4-0	furnace.....	115	233
D. W. Boone.....	Thos. Stead.....	*Nutor Sew	4-0	furnace.....	18	234
J. D. Campbell.....	W. R. Hall.....	*Nutor Sew	4-0	furnace.....	75	235
H. H. Rothwell.....	Chas. Higgins.....	*Nutor Sew	3-8	furnace.....	28	236
H. H. Rothwell.....	Chas. Higgins.....	*Nutor Sew	3-8	furnace.....	44	237
H. H. Blackburn.....	James Gilbert.....	Sewell.....	4-0	furnace.....	70	238
H. H. Blackburn.....	Thos. Gosner.....	Sewell.....	4-0	fan.....	112	239
C. E. Burnley.....	John H. Pempsey.....	Sewell.....	3-8	fan.....	34	240
Wm. McGuffin.....	Thos. A. Burke.....	Sewell.....	3-0	natural.....	109	241
John Laing.....	Thos. Morgan.....	Sewell.....	4-0	natural.....	57	242
John Laing.....	James Laing.....	Sewell.....	4-2	furnace.....	73	243
G. H. Caperton.....	Robert Boyd.....	Fire Creek.....	2-10 4-0	fan and nat	96	244
J. R. Seal.....	John Riley.....	Fire Creek.....	3-0	fan.....	95	245
J. R. Seal.....	John Riley.....	Sewell.....	3-11	furnace.....	95	246
T. C. Beury.....	Geo. McDaniel.....	Fire Creek.....	4-0	fan.....	150	247
John Laing.....	Wm. D. Nisbet.....	Fire Creek.....	4 to 8-0	fan.....	160	248
John Laing.....	John Long.....	Fire Creek.....	4 to 7-0	fan.....	138	249
G. H. Caperton.....	Thos. Boyd.....	Sewell.....	4-4	fan and nat	130	250
C. C. Beury.....	Harvey Phelps.....	Fire Creek.....	4-0	natural.....	73	252
John Gilmoor.....	John Dempsey.....	Fire Creek.....	4-0	natural.....	70	253
C. C. Beury.....	R. B. Hanna.....	Fire Creek.....	3-8	fan.....	155	254
Geo. Lawton.....	H. C. Peters.....	Fire Creek.....	4-0	fan.....	103	255
Mike Crouch.....	Richard Seymour.....	Fire Creek.....	3-0	furnace.....	40	256
P. J. Riley.....	Peter McQuade.....	Fire Creek.....	3-0	257
F. E. Wallace.....	J. A. McCallister.....	Sewell.....	5-0	fan.....	230	258
F. E. Wallace.....	J. A. McCallister.....	Sewell.....	5-0	fan.....		259
Geo. Jones.....	David Evandall.....	Sewell.....	5-0	fan.....		130 260
Justus Collins.....	Thos. A. Lewis.....	Sewell.....	5-0	fan.....		400 261
Justus Collins.....	Thos. A. Lewis.....	Sewell.....	5-0	fan.....		400 262
James Laing.....	James Martin.....	Sewell.....	6-0	fan.....	200	263
Thos. Nichols.....	Sewell.....	5-0	fan.....	100	264
James McGuffin.....	E. T. Hudson.....	Sewell.....	5-0	furnace.....	60	265
James McGuffin.....	A. P. Gibson.....	Sewell.....	5-0	fan.....	110	266
Ed. Crickmoor.....	John Jackson.....	Sewell.....	6-0	natural.....	150	267
Samuel Dixon.....	V. R. Miller.....	Sewell.....	5 6	fan.....	290	268

*Nuttall and Sewell are the same seam.

DIRECTORY OF MINES IN THE STATE OF WEST VIRGINIA, FOR THE YEAR ENDING JUNE 30, 1901:

No.	County.	Name of Mine.	Name of Company.	Postoffice Address.
269	Fayette	Sugar Creek	Sugar Creek Coal & Coke Co.	Macdonald
270	"	Carlisle & Bragg Hill	White Oak Fuel Co.	Scarbrough
271	"	Derryhale	McKell Coal & Coke Co.	Glen Jean
272	"	Big Que	Quinnimont Coal Co.	Quinnimont
273	"	Robins	Robins Coal Co.	Quinnimont
274	"	Laurel Creek	Laurel Creek Coal Co.	Quinnimont
275	"	Greenwood	Greenwood Coal Co.	Lawton
276	"	Gaston	Carbon Coal & Coke Co.	Carbondale
277	"	National	National Coal & Coke Co.	Carbondale
278	"	No. 1	W. P. Rend	Rend
279-82	"	No. 2, 3, 4 and 5	W. P. Rend	Rend
283	"	Bell Creek	Bell Creek Coal Co.	Belva
284	Raleigh	Royal	Royal Coal & Coke Co.	Prince
285	"	Wright	Wright Coal & Coke Co.	Prince
286	"	Raleigh No. 1 and 2	Raleigh Coal & Coke Co.	Raleigh
287	"	Stonewall	Stonewall Coal & Coke Co.	Stonewall
288	"	Lanark	Lanark Fuel Co.	Prince
289	Mingo	Camp Branch	Camp Branch Coal & Coke Co.	Dingess
290	"	Olympia	Olympia Coal Co.	Dingess
291	"	Freeport	Freeport Coal Co.	Dingess
292	"	Maritime	Logan Cons. Coal Co.	Thacker
293	"	Red Jacket	Red Jacket Coal Co.	Hunter
294	"	Logan	Logan Cons. Coal Co.	Hunter
295	"	Thacker	Thacker Coal & Coke Co.	Thacker
296	"	Alma	Mingo Coal Mining Co.	Hatfield
297	"	Lynn	Lynn Coal & Coke Co.	Sheppard
298	"	Grapevine	Grapevine Coal Co.	Edgerton
299	"	Lick Fork	Lick Fork Coal Co.	Thacker
300	"	Pearl	Pearl Coal Co.	Dingess
301	McDowell	Tidewater	Tidewater Coal & Coke Co.	Vivian
302	"	Bottom Creek	Bottom Creek Coal & Coke Co.	Vivian
303	"	Peerless	Peerless Coal & Coke Co.	Vivian
304	"	Empire	Empire Coal & Coke Co.	Landgraf
305	"	Shawnee	Shawnee Coal & Coke Co.	Eckman
306	"	Eureka	Eureka Coal & Coke Co.	Eckman
307	"	Pulaski	Pulaski Iron Co.	Eckman
308	"	Keystone	Keystone Coal & Coke Co.	Keystone
309	"	Algoma Coaling Sta.	Algoma Coal & Coke Co.	Algoma
310	"	Algoma	Algoma Coal & Coke Co.	Algoma
311	"	Gilliam	Gilliam Coal & Coke Co.	Gilliam
312	"	Rolfe	Rolfe Coal & Coke Co.	Worth
313	"	Roanoke	Roanoke Coal & Coke Co.	Worth
314	"	Indian Ridge	Indian Ridge Coal & Coke Co.	Worth
315	"	Arlington	Arlington Coal & Coke Co.	McDowell
316	"	Greenbrier	Greenbrier Coal & Coke Co.	McDowell
317	"	McDowell	McDowell Coal & Coke Co.	McDowell
318	"	Ashland	Ashland Coal & Coke Co.	Ashland
319	"	Elk Ridge	Elk Ridge Coal & Coke Co.	Kyle
320	"	Lynchburg	Lynchburg Coal & Coke Co.	Kyle
321	"	Powhatan	Powhatan Coal & Coke Co.	Powhatan
322	"	Upland No. 1 and 2	Upland Coal & Coke Co.	Elkhorn
323	"	Houston	Houston Coal & Coke Co.	Elkhorn
324	"	Crozer No. 1	Crozer Coal & Coke Co.	Elkhorn
325	"	Crozer No. 2	Crozer Coal & Coke Co.	Elkhorn
326	"	Turkey Gap	Turkey Gap Coal & Coke Co.	Ennis
327	"	Norfolk	Norfolk Coal & Coke Co.	Mayberry
328	"	Angle	Norfolk Coal & Coke Co.	Mayberry
329	"	Lick Branch	Norfolk Coal & Coke Co.	Mayberry
330	"	Delta	Norfolk Coal & Coke Co.	Mayberry
331	"	Shamokin	Shamokin Coal & Coke Co.	Mayberry
332	"	Elkhorn	Elkhorn Coal & Coke Co.	Mayberry
333	"	Big Four	Big Four Coal & Coke Co.	Norwood
334	"	Big Sandy	Big Sandy Coal & Coke Co.	Big Sandy
335	"	Davy	Davy Crockett Coal & Coke Co.	Hallsville

*NAME OF SUPERINTENDENT, NAME OF MINE BOSS, SEAMS
WORKED AND THICKNESS, AND TOTAL NUMBER
OF INSIDE EMPLOYEES.*

Name of Superintendent.	Name of Mine Boss.	Name of Coal Bed Worked.	Thickness, ft. in.	Kind of Ventilation.	Total Inside Employees.	No.
Enoch Smith.....	E. J. Robertson.....	Sewell.....	5-0	fan	140	269
J. J. Smiley.....	Isaac Swift.....	Sewell.....			100	270
Thos. Nichols.....	Thos. A. Lewis.....	Sewell.....	5-6	fan	75	271
Wm. Dills.....	J. W. Paxton.....	Fire Creek.....	4-4	natural	180	272
Chas. Robius.....	Wm. Hunter.....	Fire Creek.....	3-6	natural	26	273
W. A. Brown.....	J. H. Brown.....	Fire Creek.....	3-6	fan	87	274
W. A. Brown.....	W. A. Crickmoor.....	Fire Creek.....	4-0	natural	265	275
C. A. Cabell.....	James Youell.....	Gas No. 2.....	5-10	fan	36	276
Frank Howan.....	Lee Jenkins.....	Gas No. 2.....	5-8	furnace.....	77	277
David Orr.....	Geo. Moran.....	Fire Creek.....	3-6 to 6-0	fan	285	278 to
David Orr.....	J. W. Schwitzer.....	Sewell.....	4-10	fan		
J. A. Straughan.....	J. A. Straughan.....	Coalburg.....	4-0	furnace.....	20	283
John Howald.....	R. D. Baldwin.....	Fire Creek.....	4 0	furnace.....	116	284
Gaston Caperton.....	H. L. Walker.....	Fire Creek.....	4-0	air shaft.....	77	285
T. H. Brunn.....	W. S. Williams.....	Fire Creek.....	4-4	fan	116	286
John Lee.....	J. W. Alley.....	Fire Creek.....	4-0		36	287
James Laing.....		Fire Creek.....	3-11		25	288
James Little.....	Wm. Dials.....	Lo. Kitt'ing.....	4-0	furnace.....	83	289
W. T. Poole.....		Freeport.....	4-6	furnace.....	9	290
J. P. Beatty.....	S. F. Myers.....	Freeport.....	4-6	furnace.....	15	291
S. T. Lambert.....	W. Hearb.....	Lo. Kitt'ing.....	4-10	furnace.....	102	292
S. T. Lambert.....	John Cunningham.....	Lo. Kitt'ing.....	4-8	fan & fur.....	191	293
S. T. Lambert.....	W. R. Wilbur.....	Lo. Kitt'ing.....	4-8	fan	273	294
A. Moore.....	M. F. Boothe.....	Lo. Kitt'ing.....	5-8	furnace.....	145	295
J. Williams.....	W. P. Farne.....	Lo. Kitt'ing.....	3-8	furnace.....	47	296
Geo. Coffey.....	Geo. Coffey.....	Lo. Kitt'ing.....	4-0	furnace.....	95	297
J. W. Woolcock.....	Wm. Moore.....	Lo. Kitt'ing.....	6-8	furnace.....	59	298
S. C. Fisher.....	Russell Wilbur.....	Lo. Kitt'ing.....	6-10	furnace.....	160	299
S. Morrison.....	F. C. Elkins.....	Lo. Kitt'ing.....	4-6	furnace.....	63	300
F. S. Schoew.....	James Saunders.....	Poca. No. 3.....	5-10	fan	125	301
Wm. Spencer.....	H. Anderson.....	Poca. No. 3.....	6-0	fan	90	302
L. E. Tierney.....	Wm. Devenny.....	Poca. No. 3.....	6-0	fan	121	303
W. D. Ord.....	J. S. Lanks.....	Poca. No. 3.....	5-10	fan	75	304
P. P. Flanagan.....	J. P. Homey.....	Poca. No. 3.....	6-3	fan	90	305
L. E. Tierney.....	C. Hughes.....	Poca. No. 3.....	6-2	fan	130	306
S. Fisher Morris.....	A. Lindley.....	Pocahontas.....	6-0	fan	172	307
J. K. F. Steele.....	John Murray.....	Poca. No. 3.....	6-0	fan	135	308
W. H. Thomas.....	H. H. Taylor.....	Poca. No. 3.....	5-8	furnace.....	14	309
W. H. Thomas.....	W. J. Pritchard.....	Poca. No. 3.....	5-8	fan	193	310
P. P. Flanagan.....	G. C. Tabor.....	Poca. No. 3.....	6-0	fan	85	311
J. E. Jones.....	Wm. Walters.....	Poca. No. 3.....	5-3	fan	110	312
A. D. Rice.....	Ben Tipton.....	Pocahontas.....	5-3	fan	100	313
C. D. Botsford.....	Jesse Harkworth.....	Poca. No. 3.....	5-3	fan	88	314
R. Palmer.....	John Cornell.....	Poca. No. 3.....	5-8	fan	90	315
Jairus Collins.....	John Moore.....	Poca. No. 3.....	6-0	fan	95	316
T. H. Cooper.....	Levi Workman.....	Pocahontas.....	5-6	fan	74	317
Wm. Phillips.....	Marion Cox.....	Poca. No. 3.....	5-6	fan	150	318
L. E. Tierney.....	C. A. Devenny.....	Poca. No. 3.....	6-6	fan	110	319
L. E. Tierney.....	W. T. Heatherman.....	Poca. No. 3.....	7-6	fan	160	320
L. E. Tierney.....	James Heatherman.....	Poca. No. 3.....	7-9	fan	155	321
J. J. Lincoln.....	H. A. Frankenfield.....	Poca. No. 3.....	7-9	fan	165	322
T. F. Houston.....	Benj. Lewis.....	Pocahontas.....	8-2	fan	157	323
Sam Evans.....	J. K. Bailey.....	Poca. No. 3.....	7-10	fan	371	324
W. H. McQuail.....	Geo. Gny.....	Poca. No. 3.....	7-10	fan		325
James E. Jones.....	James Hopkins.....	Poca. No. 3.....	8-0	fan	210	326
James E. Jones.....	James Devenny.....	Pocahontas.....	9-0	fan	132	327
James E. Jones.....	W. F. Whitl.....	Pocahontas.....	7 to 9-0	fan	75	328
James E. Jones.....	J. D. Devese.....	Pocahontas.....	8-6	fan	105	329
James E. Jones.....	W. H. Walters.....	Pocahontas.....	8-3	fan	25	330
J. A. Cardwell.....	E. M. Stephens.....	Poca. No. 3.....	8-4	fan	170	331
J. E. Barlow.....	Thos. Barrett.....	Poca. No. 3.....	7-6	fan	150	332
Wm. Lindsey.....	Wm. Cook.....	No. 4.....	4-0	fan	13	333
Wm. Griffiths.....	Albert Tilly.....	No. 6.....	3-6	furnace.....	23	334
J. F. Mitchell.....	A. Mitchell.....	Pocahontas.....	3-0	furnace.....	15	335

DIRECTORY OF THE MINES IN THE STATE OF WEST VIRGINIA, FOR THE YEAR ENDING

JUNE 30, 1901,

No.	County.	Name of Mine.	Name of Company.	Postoffice Address.
336	McDowell	Tug River.....	Tug River Coal & Coke Co.....	Tug.....
337	"	Twin Branch.....	Twin Branch Mining Co.....	Hallsville.....
338	"	Cambridge.....	Cambridge Coal & Coke Co.....	Rodenfield.....
339	"	Antler.....	Antler Coal & Coke Co.....	Welch.....
340	"	Glen Alum.....	Glen Alum Coal Co.....	Glen Alum.....
341	"	Short Creek.....	Short Creek Coal & Coke Co.....	Hallsville.....
342	Mercer	Sterling.....	Mill Creek Coal & Coke Co.....	Cooper.....
343	"	Coaldale.....	Coaldale Coal Co.....	Coaldale.....
344	"	Buckeye.....	Buckeye Coal & Coke Co.....	Freeman.....
345	"	Caswell.....	Caswell Creek Coal & Coke Co.....	Freeman.....
346	"	Booth-Bowen.....	Booth-Bowen Coal & Coke Co.....	Freeman.....
347	"	Louisville.....	Louisville Coal & Coke Co.....	Goodwill.....
348	"	Goodwill.....	Goodwill Coal & Coke Co.....	Goodwill.....
349	"	2nd East, west.....	Pocahontas Colliery Co.....	Pocahontas, Va.....
351	"	South & North.....	Pinnacle Coal & Coke Co.....	Duhring.....
352	"	Crane Creek.....	Crane Creek Coal & Coke Co.....	Ennis.....
353	"	Sagamore.....	Sagamore Coal & Coke Co.....	Bramwell.....
354	"	Crystal.....	Crystal Coal & Coke Co.....	Godfrey.....
355	"	Yukon.....	Yukon Coal Co.....	Bramwell.....

*NAME OF SUPERINTENDENT, NAME OF MINE BOSS, SEAMS
WORKED AND THICKNESS, AND TOTAL NUMBER
OF INSIDE EMPLOYEES.*

Name of Superintendent.	Name of Mine Boss.	Name of Coal Bed Worked.	Thickness.	Kind of Ventilation.	Total Inside Employees.	No.
			Ft. In.			
M. Packard.....	T. Shelton.....	Pocahontas	4-0	furnace	41	336
J. E. Rhodemyre.....	M. J. Gillespie.....	Pocahontas	3-10.....	furnace.....	31	337
E. M. Sands.....	S. N. Daugharty.....	No. 6.....	3-11.....	furnace	29	338
J. W. Edwards	Pocahontas	4-0	339
T. B. Dennen.....	Up. Freept	6-4	340
A. B. Booker.....	J. G. Richardson.....	No. 6.....	3-8	furnace.....	9	341
T. H. Cooper.....	James Martin.....	Poca. No. 3	8-0	fan.....	130	342
T. H. Cooper.....	Thos. Williams.....	Pocahontas	8-6	fan.....	175	343
John D. Hewitt.....	Thos. Gent.....	Pocahontas	6-0	fan.....	130	344
M. G. Freeman.....	M. Gilmore.....	Poca. No. 3.	8-0	2 fans.....	275	345
Harry Bowen.....	J. H. Tickel.....	Poca. No. 3.	6 to 8-0	fan.....	161	346
Jairus Collins.....	Jeff. Saunders.....	Poca. No. 3.	5-0	fan.....	135	347
Philip Goodwill.....	John Moody.....	Poca. No. 3.	4-8	fan.....	80	348
Walter O'Malley.....	A. J. King.....	Poca. No. 3.	9-0	fan.....	24	349
Frank P. Harmon.....	R. J. Early.....	Poca. No. 3.	4-8	351
W. H. McQuail.....	4-6	352
Stuart M. Buck.....	Pocahontas	4-8	353
L. N. Buford	J. L. Neal.....	Poca. No. 3.	4-8	354
A. I. Godfrey.....	I. D. Brickey.....	Poca. No. 3.	9-0	natural.....	10	355

APPENDIX.

OIL LAW.

(Acts 1901, Ch. 31.)

An act to provide for the inspection of and regulation of oil used for illuminating purposes in coal mines.

(In effect May 15, 1901.)

Be it enacted by the Legislature of West Virginia:

Sec. 1. (a) That only animal, vegetable or paraffine oil or other oil as free from the evolution of smoke as a standard cottonseed oil, when burned in a miners' torch, shall be used in any open lamp or torch for illuminating purposes in any coal mine in this State and that kerosene or blackstrap oil or mixture of kerosene and blackstrap shall not be used in miners' torches for illuminating purposes in any coal mine in this State. Except that a mixture of mineral oil (other than blackstrap oil) and vegetable oil can be used [in lamps?] upon machinery used as motive power to haul coal in any mine in this State, and except further, that a mixture of mineral and vegetable oil can be used for all stationary lights.

(b) A standard cottonseed oil shall have the following test:

1. It shall be free from mineral oils or mineral oil compounds.

2. It shall be tested in a glass tube one and one-half inches in diameter by eight inches deep, and the oil shall be at a temperature of sixty degrees Farenheit when the test is made and shall not exceed twenty-four degrees Tagliabue hydrometer.

3. If the oil to be tested is below forty-five degrees Farenheit temperature, it must be slowly heated until it reaches eighty-five degrees temperature. Should the oil be above forty-five degrees temperature and below sixty-five degrees, it must be heated to seventy degrees, when, in either case it must be well shaken and allowed to cool gradually to a temperature of sixty degrees, when the test must be made.

4. In testing the gravity of oil the hydrometer must be, when possible, read from below, and the last line which appears under the surface of the oil shall be regarded as the true reading.

5. Where the oil is tested in difficult circumstances an allowance of one-half of one degree may be made for error of parallax.

6. All oil sold to be used for illuminating purposes in the mines of this State shall be contained in barrels, casks or packages branded conspicu-

ously with the name and address of the manufacturer of said oil, the specific gravity of the same and the date of shipment.

Sec. 2. (a) Any person, firm or corporation, either, by themselves or an agent or employe, which shall sell or offer for sale for illuminating in any mine in this State any oil or any mixture or compound of oils which does not comply with the tests as prescribed in section one of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than twenty-five dollars nor more than one hundred dollars for each offense.

(b) And any miner or employe in any mine, or employe of any mine operator or mine owner, who shall knowingly use or permit to be used for illuminating purposes in any mine in this State any oil other than that prescribed in section one of this act shall, upon conviction thereof be fined not less than five dollars nor more than twenty-five dollars for each and every offense and in default of payment of such fine within 20 days from the day of conviction shall be given a sentence in the county jail for a period of not less than ten nor more than sixty days.

(c) It shall be the duty of the district mine inspector whenever they have reason to believe that oil is being used or sold or offered for sale in violation of the provisions of this Act, to take samples of the same and have them tested under the direction of the Chief Mine Inspector, and if they are found to be inferior to the quality prescribed by this Act, the inspector shall make complaint to the Prosecuting Attorney of the county in which the offense is committed, who shall forthwith commence proceedings against the offender in any court of competent jurisdiction.

Any miner, mine employe, firm, corporation, or their agents who shall refuse to permit the mine inspector to examine his or their oil used for or sold for illuminating purposes in the coal mines in this State shall be guilty of a violation of this act and may be taken before any Justice of the Peace and fined five dollars or imprisoned in the county jail for ten days for each offense.

(d) In all cases of prosecution where the accused stands convicted of a violation of this act the cost of such prosecution shall be borne by the person, firm or corporation so convicted, and in case of failure to convict the accused the State shall pay the costs in the same manner as in other prosecutions for misdemeanors.

CHECKWEIGHMAN.

(Chapter 20, Acts 1901.)

An act providing for the weighing of certain products and fixing and prescribing the duties of checkweighman or weighmaster.

(In effect May 23, 1901.)

Be it enacted by the Legislature of West Virginia:

Sec. 1. Where the amount of wages paid to any of the persons employed in any manufacturing, mining or otherwise public enterprise employing la-

bor, depend upon the amount produced by weight or measure, the persons so employed may at their own cost, station or appoint at each place appointed for the weighing or measuring of the products of their labor a checkweighman or measurer, who shall in all cases be appointed by a majority ballot of the workmen employed at the works where he is appointed to act as such checkweighman or measurer.

Sec. 2. Every corporation, company or person engaged in the business of mining coal in this State, where such checkweighman is employed by the miners working at such mines, shall furnish such checkweighman with a check or number and pay the said checkweighman for all coal placed to his check or number same per ton as is paid to the miners. Each of the persons so employed to see the weighing of said coal before entering upon the discharge of the duties of his employment shall take and subscribe an oath before a justice of the peace or a notary public, that he will honestly and impartially do and perform the duties of his employment and do equal and exact justice between employers and employes to the best of his judgment, skill and ability.

Sec. 3. This act shall apply to all weights, balances, steelyards, and weighing machines and measures used in any factory, mine, mill or otherwise industrial concerns for determining the wages payable to any person employed according to the mineral or otherwise products produced by them through their labors.

Sec. 4. Where the weighman is mutually selected by the consent of a majority of the miners working in any mine and the operator or agent of said company it shall not be considered necessary to employ said checkweighman, but at any time that either of the parties to said agreement should become dissatisfied with said weighman they may dismiss him on ten days' notice or the miners may employ a checkweighman. Any corporation, company or person violating any of the provisions of this act shall be guilty of misdemeanor and upon conviction thereof shall be fined for each and every offense not less than ten nor more than two hundred dollars.

It shall be the duty of every court in each county, in which any such coal mine is operated and in which a grand jury is empaneled, to give this act in charge to the grand jury.

ELKHORN FLOOD.

On the morning of June 22nd, 1901, an unusually heavy storm swept over Flat Top Mountain in the Counties of Mercer, McDowell, West Virginia, and Tazewell, Virginia. In six hours the rainfall measured four inches. The Elkhorn, Dry Fork and Tug Rivers on the western slope and Simmons Creek and Bluestone River on the eastern slope of the divide soon became rushing torrents and destroyed much property along their courses.

The greatest rise seems to have been on Elkhorn and Dry Fork, on the western slope.

Along the Elkhorn are located some thirty coal and coke plants, with their necessary stores, dwellings, power plants, shops, tipples and coke

ovens. The main line of the Norfolk and Western Railroad follows the Elkhorn. In a distance of 12 or 13 miles the aggregate mileage of railroad, including the switches and side tracks at the mines and ovens, is not less than 100 miles.

The valleys of the Elkhorn and tributaries are narrow and do not exceed one-fourth mile at any point and often contract to 200 feet. The mountains are from 500 to 800 feet high, and have a slope of 20 to 30 degrees.

In the mad rush of the waters of the Elkhorn, which had risen twenty-five feet above its normal stage, the greater part of the railroad and sidings were washed out and destroyed, coke ovens were flooded and damaged and many houses were demolished and swept away, over 200 railroad cars were lost, many persons lost their houses and their entire belongings, and as many as thirty-five lives were lost in the entire devastated district.

Owing to the flood having come in the daytime the loss of life is so low.

Fortunately, few of the commissaries suffered much loss and they were well prepared to care for the stricken families. However, many contributions were promptly made by the people throughout the State and supplies were sent until it became necessary to request their discontinuance.

In three weeks' time a majority of the coal operations were able to resume shipment eastward, but it was not for four or five weeks that the railroad was able to resume the handling of west bound traffic.

It is estimated that the loss sustained by the operators was no less than \$150,000.00, this not including the loss entailed by the enforced idleness of the plants.

The loss to the railroad in cost of damage to road and loss of cars was fully \$600,000.00.

The mine employes suffered the loss of about two weeks' time.

RULES ADOPTED AT THE MINES.

The operators of coal mines in the State have very generally complied with the law requiring the adoption of rules at the mines. Below will be found copies of rules as adopted by several companies.

The rules adopted by The Monongah Company were generally adopted by all of the operations in the Fairmont-Clarksburg field.

NOTICE.

Rules and Regulations, adopted by The Monongah Company, for the government and operation of its mines at and near Monongah, in Marion County, West Virginia:—

Chapter 106 of the Acts of the Legislature of 1901, section 20, reads as follows:—

“There shall be adopted by the operator of every mine in this State special rules for the government and operation of his mine or mines, covering all the work pertaining thereto in and outside of the same, which, however, shall not be in conflict with the provisions of the mining laws of this State. Such rules, when established, shall be printed on cardboard and shall be posted up in the drumhouse, tippie or some other conspicuous

place about the mines where the same may be seen and observed by all the employes at such mines, and when said rules are so posted the same shall operate as notice to all the employes at such mine of their acceptance of the contents thereof. And it shall be the duty of each mine operator to furnish a printed copy of said rules to each of his employes when requested by either or any of them."

Rule 1. It shall be the duty of each and every employe of this company to inform himself in reference to his duties under the mining laws of this State and to comply strictly therewith.

FIRE BOSS.

Rule 2. The Fire Boss shall place and maintain at the entrance to the mine a sign board. Upon entering the mine he shall erase all marks on the sign board and write the day of the month, and before proceeding to examine the mine he shall see that the air current is traveling in its proper course.

Rule 3. On entering the mine at the beginning of work he shall examine the same with a safety lamp and mark the face of all rooms or working places with the day of the month, to indicate that inspection has been made and that the room or working place is free from fire damp or dangerous gas. Two large crosses with the day of the month between them thus: X30X indicates the presence of fire damp or dangerous gasses and Extreme Danger. These marks must be made on a cap piece or other timber and laid in the roadway at the mouth of room or entrance to working place. After complete examination of the mine has been made the fire boss shall come out of the mine and write upon a board, provided at the entrance, the day of the month and sign his name, and if any part of the mine has been found dangerous he shall write on the board the word XDangerX and the name of the locality where the danger exists, and he shall personally or otherwise notify the men who work in such places as to the danger and warn them not to proceed to work until he has removed the danger. He shall then proceed to remove the gas in such places, and in doing so he shall see that the gas so removed will not be carried to the workmen in any other part of the mine. Should the fire boss need assistance in removing gas from any section or parts of a mine he shall designate the person to act as such assistants.

Rule 4. The Fire Boss shall not only discharge the duties imposed by the foregoing rules, but every duty required of him by law.

MINE BOSS.

Rule 5. The Mine Boss and his assistants shall familiarize themselves with the mining law of the State, and shall comply with the requirements thereof by discharging every duty imposed upon them by law and by the rules of the corporation.

Rule 6. He shall visit each working place in the mine at least once in every three days and direct the miners and other employes in their work and see that his instructions are complied with, and he shall direct the miners to securely prop their working places and to see that the miners

drive breakthroughs at distances not to exceed 100 feet apart. In the absence of a Fire Boss he shall have charge of the ventilating machinery or power. In case the ventilation of the mine should be interrupted by the stopping of the fan or by a fall of the roof, or from other causes, he shall immediately instruct all employes to withdraw from the mine until the ventilation is restored.

Rule 7. The Mine Boss shall have delivered to the miners at their working places all such timber as is required to make the working place safe.

Rule 8. The Mine Boss shall see that the necessary notices of warning are kept posted at the entrance to all abandoned parts of the mine.

Rule 9. He shall regulate the time when shots may be fired by the miners and shall see that no greater quantity of powder or other explosive is stored in or taken into the mine than is necessary for one shift of 12 hours, and he shall not permit quantities of oil to be stored inside of the mine.

Rule 10. Where the mine is worked by shaft or where a mechanical haulage is used in the mine he shall post in the engine house, at the top and bottom of the shaft and at points along the haulage, the code of signals which shall govern the operation of the machinery.

Rule 11. The Mine Boss shall not only discharge all the duties imposed upon him by the foregoing rules, but every duty required of him by law.

DUTIES OF MINERS.

Rule 12. The Miners shall inform themselves as to their duties under the mining laws of this State and their duties under the rules prescribed by the corporation and strictly observe and obey the same. They shall observe every precaution to prevent accidents in and about the mines; they shall not work in an unsafe place when timber would remedy the danger. Miners shall not take kegs of powder into the mines, nor shall a miner take powder or other explosives into the mines in greater quantities than is necessary for one shift of twelve hours.

Rule 13. The miner shall each day, before beginning work, examine his working place and take down all dangerous slate, or otherwise make it safe by properly timbering, and he shall always keep on hand, and available, the necessary props and caps for timbering. Should a dangerous condition arise and he be without timber he shall immediately cease work, vacate his working place and report the fact to the Mine Boss.

Rule 14. No miner or other employe shall be permitted to burn kerosene or blackstrap oil in his lamp within the mine, under penalty of fine and imprisonment.

GENERAL RULES.

Rule 15. No person or employe known to be in a state of intoxication shall enter or be permitted to enter the mine, under penalty of prosecution for trespass.

Rule 16. No person or persons shall go into abandoned parts of the mine unless permission be granted by the Mine Boss or Fire Boss.

Rule 17. All prisons, except those duly authorized, are forbidden to

meddle or tamper in any way with any electric signals, switches or signal wire in or about the mine.

Rule 18. Persons seeking employment shall secure it outside of the mine.

Rule 19. All persons riding upon or in the cars going in or out of the mines do so at their own risk.

Adopted and posted as required by law on the 15th day of May, 1901.

THE MONONGAH COMPANY

NOTICE

The following Special Rules and Regulations are adopted by The Monongah Company for the government and operation of its No. 6 Mine, and are in addition to the Rules and Regulations adopted and posted May 15th, 1901.

FIRE BOSS

Rule 1. It shall be the duty of the Fire Bosses to do all shooting: which shooting shall only be done between the hours of 6 P. M. and 5 A. M., unless by special orders from the Mine Boss in charge.

Rule 2. No Fire Boss shall fire more than one shot at a time in any working place; and an interval of ten minutes must elapse before a second shot is fired in the same place, and, during this interval, it shall be the duty of the Fire Boss to examine the working place for gas.

Rule 3. No Fire Boss shall at any time fire a shot before he has examined all places for gas within 20 yards of the place where such shot is to be fired.

GENERAL RULES

A competent person appointed by the Mine Boss shall examine every safety lamp immediately before it is taken into the mine for use, and such lamp shall not be used until so examined and found in safe working order and securely locked.

A safety lamp shall not be unlocked except at the appointed lamp station or for the purpose of firing a shot, and then only by the Fire Boss or the person regularly appointed by such Fire Boss or shot-firer.

No cartridge shall be forcibly pressed into a hole of insufficient size, and in case a cartridge becomes fast in a hole, the Mine Boss or his assistant must be immediately notified by the miner.

No person or employe shall, at any time, take an open light, match or matches, lighted cigar or pipe into this mine.

No wireman, machineman or any other employe shall have any wire in advance of the regular air current unless such wire is properly insulated; and all machine men must examine their cables for any defects of insulation; and if any defects are found, must not cut a place without first notifying the Mine Boss or Fire Boss and have his consent.

THE MONONGAH COMPANY

Monongah, W. Va., May 20th, 1901

RULES AND REGULATIONS

Adopted by The Davis Coal and Coke Company for the Government and Operation of its Different Mines.

NOTICE.

Rules and Regulations adopted by the Davis Coal and Coke Company for the government and operation of its mine, at in County, W. Va., made in compliance with the requirements of the Acts of the Legislature of 1901, Chapter No. 106, Section No. 20, which reads: "There shall be adopted by the operator of every mine in this State special rules for the government and operation of his mine or mines, covering all the work pertaining thereto in and outside of the same, which, however, shall not be in conflict with the provisions of the mining laws of this State."

RULE I.

It shall be the duty of each employe of this Company to comply with the mining laws of this State.

RULE II.

The mine boss shall comply with the requirements of the mining law of this State, and shall familiarize himself with the mining law.

SECTION A.

He shall visit each working place in the mine at least once in every three days, and direct the miners and other employes in their work, and see that his instructions are complied with; and he shall direct the miners to securely prop their working places, and see that the miners drive breakthroughs at proper distances. In the absence of the electrician or machinist he shall have charge of all ventilating machinery or power, and will at all times see that a sufficient amount of air is being delivered into the mine.

SECTION B.

The mine boss shall see that a sufficient amount of timber, of proper sizes and shape, is delivered to the miners at their working faces.

SECTION C.

In all shaft mines the mine boss shall see that a stationary light is kept at the top and the bottom of the shaft, and he shall see that the same is kept in good repair and lighted during darkness as long as the mine is being operated, or as long as men are in the shaft. On all haulways where haulage is done by machinery of any kind the mine boss shall provide a proper system of signals and a conspicuous light, and he shall also provide for the carrying of a conspicuous light on the front end of every trip or train of cars when in motion.

SECTION D.

Where the mine is worked by shaft, or where mechanical haulage is used in the mine, he shall see that there is posted in the engine house at the top and the bottom of the shaft, and at convenient and accessible points along the haulage, a code of signals which shall govern the operation of the machinery.

SECTION E.

In all shaft mines a metal tube from the top to the bottom of such a shaft, suitably adapted to the free passage of sound, through which conversation may be held with persons at the top and at the bottom of the shaft, shall be provided and maintained; also, the ordinary means of signaling. It shall also be the duty of the mine boss to see that the safety catches and a sufficient cover overhead are on every carriage used for lowering and hoisting persons, and at the top of the shaft a safety gate shall be provided and maintained. He shall also see that there is an adequate brake on the drum of every machine used to lower or hoist persons in such shaft, and he shall also see that the machinery used for such lowering and hoisting is kept in safe condition, and inspected once in each 24 hours by some competent person.

SECTION F.

The mine boss shall regulate the time when shots may be fired by the miners.

SECTION G.

The mining boss will see that in every mine worked by shaft or slope that the engineer in charge is competent and sober. He will further see that no person, except such as may be deputed for that purpose by the operator or agent, shall interfere with any part of the machinery, or shall interfere with or intimidate the engineer in the discharge of his duties, and in no case shall more than ten persons ride on any cage or car at one time, and no person shall ride on a loaded cage or car in any shaft or slope. He shall further see that on all traveling ways, used by persons in any mine, safety or refuge holes are provided; and that such refuge holes are kept free from obstructions, and the roofs and sides thereof shall be made secure.

DUTIES OF MINERS.

RULE III.

Miners shall observe every precaution to prevent accidents in or about the mine. They shall not work in an unsafe place when timber would remedy the danger.

SECTION A.

The miner shall each day before beginning work examine his working place, and take down all dangerous slate, or otherwise make it safe by

timbering, and he shall always keep on hand and available the necessary props and caps for timbering. Should a dangerous condition arise, he shall immediately report the fact to the mine boss.

No miner shall be permitted to burn kerosene or blackstrap or any oil in his lamp within the mine other than the standard oil prescribed by the mine law of this State, under penalty of fine and imprisonment by the State authorities.

SECTION B.

No miner, workman, or other person shall knowingly injure any shaft, lamp, instrument, air course, or brattice, or obstruct or throw open airways or carry matches, or open lights into places worked by safety lamps, or disturb any part of the machinery, or open any door used for directing ventilation and not close it again promptly, or enter any part of the mine against caution, or disobey any order given in carrying out any of the provisions of this section, or do any other act whereby the life or health of any person employed in the mines, or the security of the mine is endangered. (Acts, 1890, Chapter IX.)

SECTION C.

The attention of the miners and other employes is called to Acts of 1901, Chapter No. 106, Section No. 10, of the Mine Laws of West Virginia, in regard to the quantity of powder or other explosives allowed to be carried into the mine each day.

GENERAL RULES.

RULE IV.

No person or employe known to be in a state of intoxication shall be permitted to enter the mine, under penalty of prosecution for trespass. None but thoroughly competent and sober men will be employed in positions of responsibility and trust. The use of intoxicating liquors in the mines or on the plant is strictly prohibited. And person found guilty of this practice will be dismissed immediately.

RULE V.

No person or persons shall go into abandoned parts of the mine which have notices posted forbidding entrance unless permission be granted by the mine boss.

RULE VI.

All persons, except those duly authorized, are forbidden to tamper in any way with any electric or signal wire in or about the mine.

RULE VII.

All persons, except those duly authorized, are forbidden to ride upon the cars on headings and gangways.

RULE VIII.

The employment of females of any age, or of boys under twelve years of age is prohibited. In the case of boys where the question of age is in doubt, the parents or guardians of such boys shall furnish affidavits of their ages. It shall be the duty of the mine boss to see that this rule is strictly complied with. The law prescribes a penalty of not less than \$10.00 for each and every such offense. This penalty applies also to parents and guardians of such children who allow them to work or misrepresent their ages.

RULE IX.

All persons seeking employment must secure it outside of the mine. No person, not an employe, will be allowed to enter the mine unless permission be granted by the mine boss, or by permission of the operator or agent, under penalty of prosecution for trespass.

RULE X.

All miners are required to use the regular brass checks prescribed by the Company.

RULE XI.

All miners and other employes are prohibited from absenting themselves from their work without permission of the mine foreman, except in the case of sickness, and in such case word must be sent to the mine foreman as soon as possible.

RULE XII.

Miners will not be allowed to interfere with the drivers in the distribution of empty mine cars. In all cases where they do not receive their regular turn they shall report the same to the mine foreman for adjustment.

RULE XIII.

It shall be the duty of all employes to familiarize themselves with the rules of this Company, and any employe violating any of these rules will subject himself to dismissal, and, in case of accident caused by such violation, to prosecution.

Adopted and posted on the of 1901.

*KANAWHA COUNTY MINES.**NOTICE.*

Rules and Regulations adopted by the Stevens Coal Company, for the government and operation of its mines at Acme, in Kanawha County, West Virginia, made in compliance with the requirements of the Acts of the Legislature of 1901, Chapter 106, Section 20, which reads: "There shall be adopted by the operator of every mine in this State special rules for the government and operation of his mine or mines, covering all the

work pertaining thereto in and outside of the same, which, however, shall not be in conflict with the provisions of the mining laws of this State. Such rules when established shall be printed on cardboard and shall be posted up in the drum-house, tippie or some other conspicuous place about the mines where the same may be seen and observed by all the employes at such mines, and when said rules are so posted the same shall operate as notice to all the employes at such mine of their acceptance of the contents thereof. And it shall be the duty of each mine operator to furnish a printed copy of said rules to each of his employes when requested by either or any of them."

RULES.

RULE 1.

It shall be the duty of each employe of this Company to comply with the mining laws of this State, and to report any violation thereof coming under his observation to the Mining Boss.

RULE 2.

When "shot firers" are employed to fire all shots at a given time in the mines, they shall not fire any shots until all other employes are out of the mine, and then the shots shall be fired beginning at the one farthest from the in-take air current and proceeding against the air current.

RULE 3.

Every workman or miner in want of props, cap pieces and timbers shall notify the mining boss at least one day in advance, giving the length and number of props or timbers and cap pieces; but in case of an emergency the timbers may be ordered immediately upon the discovery of any danger; and it shall be the duty of each miner or workman to properly prop and secure his place in order to make the same secure for him to work therein. Every order or request upon the mining boss for props, cap pieces and timbers shall designate the place where the same is wanted.

RULE 4.

Miners and all employes shall observe every precaution to prevent accidents in or about the mine. They shall not work in an unsafe place, when timber would remedy the danger.

RULE 5.

Every miner and workman should each day before beginning work, examine his working place and take down all dangerous slate, or otherwise make it safe by properly timbering, and he shall always keep on hand and available the necessary props and caps for timbering. Should a dangerous condition arise and he be without timber, he shall immediately cease work, vacate his working place and report the fact to the Mining Boss.

RULE 6.

No miner or other employe shall take into the mine any larger quantity of powder or other explosive than he may reasonably expect to use during his term of employment of one day of twelve hours.

RULE 7.

Every miner or other employe is forbidden to burn kerosene or black-strap oil or a mixture of kerosene and black-strap, or any other oil forbidden by law, in his lamp within the mine under penalty of fine and imprisonment by the State authorities.

RULE 8.

Every person in a state of intoxication is forbidden to enter the mine under penalty of prosecution for trespass.

RULE 9.

No person or persons shall go into any abandoned part of the mine unless permission in writing be granted by the Mining Boss.

RULE 10.

All persons, except those duly authorized, are forbidden to meddle or tamper in any way with any electric or signal wire in or about or outside the mine.

RULE 11.

Every employe, except those in the proper discharge of their duties, or when necessary to escape or remove danger, is forbidden from tampering with, moving or handling any rope, wire, engine, car, switch, signal, light, notice, tool, machinery or equipment of any kind in or about or outside the mine.

RULE 12.

All employes are instructed and required to see that all engines, motors, cars, wagons, brakes, couplings, switches, ropes, wires, tools, machinery, harness, chains and equipment of every kind and character used or handled by them are in proper condition before using them, and not to use them unless they are safe.

RULE 13.

All persons who ride upon the incline or upon any car, engine or motor, do so at their own risk.

RULE 14.

No driver or employe shall hitch or attempt to hitch his mule or team to a mining machine or move the same until the front teeth are taken from the machine.

RULE 15.

Machine runners must take care of their machines and report promptly to the mining boss or electrician any repairs necessary, and they must not run a machine after the bits become too dull to do the work with ease; and they and all others working about the machine, are cautioned to guard against the swinging of the machine when the front jack is tightened at the time the machine starts to cutting. No employe or other person, except those in charge of and operating a machine, shall enter any working place while such machine is in operation without the written permission from the mining boss or electrician.

RULE 16.

Any machine runner or other person found tampering with or throwing a short circuit through a machine, will be dealt with according to law.

RULE 17.

Employees are warned as to the danger of handling powder in a rough manner, and opening the same with any kind of sharp or blunt instrument. Powder should never be thrown about, but should always be carried and laid down carefully, and kept clear of electric wires.

RULE 18.

Every car of coal sent from the mine which is not properly cleaned and prepared, shall be liable to deduction or "docking" of not less than 10 bushels.

RULE 19.

Any driver or person found mistreating a mule will be prosecuted.

RULE 20.

Any employe of this Company found taking coal from railway cars will be charged with same at the market price in addition to the regular monthly fuel charge.

RULE 21.

No employe quitting work or discharged by the Company will be paid off until he has cleaned up and left his working place in proper condition, nor if occupying a house, until he has vacated the same and surrendered possession to the Company.

RULE 22.

The pay-day of this Company will be the Saturday nearest the 20th of the month for all work done in the preceding month.

RULE 23.

Persons seeking employment shall secure it outside the mine.

RULE 24.

There will be collected and deducted each month
for each single man and for each married man for Doc-
tor, and cents from each employe for Hospital fund.

MINING BOSS.

RULE 25.

The Mining Boss is expected to thoroughly acquaint himself with the mining laws of West Virginia and with all his powers, duties and responsibilities thereunder, and to fully execute and discharge the same.

Adopted and posted this day of1901.

*NEW RIVER MINES.**NOTICE.*

Rules and Regulations, adopted by "The Gauley Mountain Coal Company," for the government and operation of its mines at Ansted, in Fayette county, West Virginia, made in compliance with the Acts of the Legislature of 1901, chapter 106, section 20, which reads:—

"There shall be adopted by the operator of every mine in this State, special rules for the government and operation of his "mine, or mines, covering all the work pertaining thereto, in, and outside of the same, which, however, shall not be in conflict with the provisions of the mining laws of this State. Such rules, when established, shall be printed on card-board, and shall be posted in the drum-house, tippie, or some other conspicuous place about the mines, where the same may be seen and observed by all the employes of such mines, and when said rules are so posted, the same shall operate as notice to all the employes of such mines of their acceptance of the contents thereof. "And it shall be the duty of each mine operator to furnish a printed copy of such rules to each of his employes when requested by either or any of them."

GENERAL RULES.

RULE 1.

It shall be the duty of each and every employe to comply strictly with the mining laws of this State as they now are, or may be amended by the Legislature, and any wilful violation of the same shall be regarded as sufficient cause for dismissal.

RULE 2.

It shall be the duty of every employe to report any violation of the mining law coming under his observation, to the foreman under whose immediate orders he may at the time be, and the foreman shall report the same to the General Manager, at his office as soon as possible.

RULE 3.

Should any gas, or other condition dangerous to life be discovered in any portion of the mines, it shall be reported promptly to the Mine Boss, who shall comply strictly with the law, a copy of which he must keep in his possession, and he shall assume the duties and authority of a Fire Boss, until the facts can be reported to the General Manager, and a regular appointment made, in accordance with the law.

Mine Boss.

RULE 4.

The Mine Boss shall have charge, and full authority over all the underground workings, and such authority outside as may be directly connected with the same; but subject at all times to the direction of the Superintendent and General Manager, whose orders he will transmit and execute promptly. He will familiarize himself with the mining laws, and comply strictly with their requirements; and as long as no explosive gases are encountered he will assume the duties of the Fire Boss in regulating the ventilation, lights, &c. He will visit each working face in the mine at least once in every three days, and see that the necessary timbers and other material are provided, and properly set to secure the safety of the men and mine. Absolute sobriety on duty will be required of all employes, and proper courtesies will be extended to, and demanded from, all subordinates.

RULE 5.

He will see that the regulation passage ways are provided, and kept open, will regulate all shooting, and see that no greater quantity of powder, or other explosive is stored or taken into the mine, than is necessary for one shift of twelve hours; nor shall he permit quantities of oil, or other combustible material, to be stored inside the mine.

RULE 6.

He will see that the necessary lights and signals are provided and kept in working order, and will at all times keep a careful watch, and test, for fire damp, in both the active and abandoned workings; nor will he permit a naked light in any place where such gas may be suspected. In case of danger from roof, gas or other cause, he will have the men promptly notified and see that they are removed from danger.

Miners.

RULE 7.

Miners shall obey all orders properly transmitted, and observe every precaution to prevent accidents. They should not work in an unsafe place when a remedy can be provided; and all danger, of whatsoever kind, should be promptly reported to the Mine Boss.

RULE 8.

A miner shall not take powder, or other explosives, into the mine in greater quantities than is necessary for one shift of twelve hours; and he shall each day examine his place before beginning work, take down any loose or dangerous slate, or make it safe with timbers. In the absence of timber, where there is danger, he should quit work and report to the Mine Boss, so as to avoid unnecessary risk. Miners will set timbers where, and whenever ordered by the Bank Boss.

RULE 9.

No miner, or other employe, is permitted by law to burn kerosene, or black-strap oil within the mine; and any violation of this act will be subject to fine and imprisonment by the State Authorities.

RULE 10.

All persons, except those duly authorized, are forbidden to meddle, or tamper in any manner with any wire, switches, rope or signal in or about the mine. Jumping on and off moving trains is prohibited; and any one riding on the trains, or incline, is in violation of orders, and does so at his own risk.

RULE 11.

No miner, or other person, known to be intoxicated, shall be permitted to enter the mine, under the penalty of prosecution for trespass; and no one, not employed therein, shall be permitted to enter without the consent of the Bank Boss. Nor shall any one enter the abandoned workings at any time without such consent.

RULE 12.

It shall be the duty of all employes to familiarize themselves with the above rules of this Company, and any one violating the same will subject himself to dismissal, and in case of accident caused by such violation, to prosecution by law. Adopted, and posted as, required by law, on the 15th day of April, 1901.

THE GAULEY MOUNTAIN COAL COMPANY.

Acting by WM. N. PAGE, *General Manager.*

NORFOLK & WESTERN FIELD.

NOTICE.

*Rules and Regulations adopted by the Logan Consolidated Coal & Coke Co. for the Government and Operation of its Coal Mine at Hunter, in Mingo County, West Virginia.
In Effect May 15th 1901.*

Such portions of these rules as pertain to the government and operation of these mines, both inside and outside of same, are made in compliance

with the requirements of the Acts of the Legislature of 1901, Chapter 106, Section 20, of the State of West Virginia.

RULE 1.

It shall be the duty of each employe of this Company to comply with the Mining Laws of this State.

Duties of Mine-Boss.

RULE 2.

The Mine-Boss shall comply with the requirements of the Mining Laws of this State, and shall familiarize himself with the Mining Laws.

RULE 3.

He shall visit each working-place in the mine at least once in every three days and direct the miners and other employes in their work. He shall direct the miners to securely prop their working-places, and see that they drive break-throughs at suitable distances to properly ventilate their working-place.

In the absence of the Fire-Boss he shall have charge of the ventilating machinery, or power.

RULE 4.

In case the ventilation of the mine should be interrupted, either by the stoppage of the fan or by a fall of the roof, he shall immediately instruct all employes to withdraw from the mine until the ventilation is restored.

RULE 5.

The Mine-Boss shall have delivered to the miners, at their working-places, all such timber as is required to make the working-places safe.

RULE 6.

The Mine-Boss shall see that the necessary notices of warnings are kept posted at the entrance to all abandoned parts of the mine.

RULE 7.

He shall see that on the front end of every trip or train of cars that a conspicuous light shall be carried when the same is in motion in the mines.

RULE 8.

He shall regulate the time when shots may be fired by the miners, and shall see that no greater quantity of powder, or other explosives, is stored in, or taken into the mine, than is necessary for one shift of twelve hours; and he shall not permit quantities of oil to be stored inside of the mine.

Duties of Fire-Bosses.

When gases are found to exist in sufficient quantity to necessitate the employment of a Fire-Boss, his duties shall be as follows:

RULE 9.

The Fire-Boss shall, before entering the mine, examine the fan or other power of ventilation and see that it is in good running order. Upon entering the mine he shall erase all marks on the sign-board and write the day of the month thus, (30); and before proceeding to examine the mine he shall see that the air current is traveling in its proper course.

RULE 10.

On entering the mine at the beginning of work he shall examine the same with a safety-lamp and mark the face of all rooms or working-places in the following manner:

The day of the month, (30), indicates that inspection has been made and that the room or working-place is free from fire-damp or dangerous gas.

Two large crosses with the day of the month between them thus, X 30 X, indicates the presence of fire-damp or dangerous gases, and extreme danger. These marks must be made on a cap-piece or other timber, laid and in the road-way at the mouth of room or working place.

RULE 11.

After complete examination of the mine has been made, the Fire-Boss shall come out of the mine and write upon a board, provided at the entrance, the day of the month, and sign his name; and if any part of the mine has been found dangerous he shall write on the board the word: X Danger X, and the name of the locality where the danger exists; and he shall personally notify the men who work in such places as to the danger and warn them not to proceed to work until he has removed the danger. He shall then proceed to remove the gas in such places, and in doing so he shall see that the gas so removed will not be carried onto the workmen in any other part of the mine. Should the Fire-Boss need assistance in removing gas from any section or parts of the mines, he shall designate the person to act as such assistant.

Duties of Miners.

RULE 12.

Miners shall observe every precaution to prevent accidents to themselves in or about the mine. They shall not work in any unsafe place when timber would remedy the danger.

RULE 13.

No miner shall take into the mine a greater quantity of powder, or other explosive, than is required for his own use for any one shift of twelve hours.

RULE 14.

The miner shall each day, before beginning work, and during the day while performing his work, examine carefully his working-place and take

down all dangerous slate, and make his working-place safe by properly timbering; and he shall always keep on hand, and available, the necessary props and caps for timbering. Should a dangerous condition arise, and he be without timber, he shall immediately cease work, vacate his working-place and report the fact to the Mine-Boss.

RULE 15.

Every miner, when putting in an under-cut, shall see that the cut is properly spragged to prevent the coal from falling upon him.

RULE 16.

Every miner is cautioned not to visit the face of his working-place after he has fired a shot in same until the smoke has been removed, when an examination of the working-face shall be made by him before beginning work.

RULE 17.

No miner, or other employe, shall be permitted to burn kerosene or black-strap oil in his lamp within the mine, under penalty of fine and imprisonment by the State authorities.

Duties of Machine-Mining Employes.

RULE 18.

Any person engaged in what is know as "Machine-Mining of Coal," as Machine-Runner, Helper, Shooter, Slate-Man or other occupation, shall be subject to the same rules as those made for the government of employes engaged at similar occupations in the mine. He shall take good care of the machine, tools, material, and explosives entrusted in his keeping, and shall guard against any accidents occurring from the machine, electric wires or other causes. He shall also examine the condition of his working-place and if found unsafe report the same to the Mine-Boss, and cease work at such place until the same is made safe. This rule shall apply to all persons engaged in Machine-Mining of Coal, and each person thus engaged shall be governed according to his occupation.

Duties of Timber-Men and Slate-Men.

RULE 19.

Ancy employe acting as Timber-Man or Slate-Man, shall make a thorough examination of the condition of the mine at the place he is to perform work, and if he finds any danger to exist he shall have such cause of danger removed before beginning work.

Care must be exercised in the performance of his work, in order to prevent accident to himself or others.

Duties of Track-Layers.

RULE 20.

Any person engaged in the occupation of Track-Man in the mine shall exercise due care and economy in the use of material and supplies. He shall, when working on tracks in the haul-ways traversed by mules, locomotives of motors, hauling cars, give proper notice that the track is being repaired, so that all movement of trips or trains of cars will approach said place under control. He shall, when such trips or trains of cars are passing, step aside into a place of safety. He shall, before beginning work on the track, examine the condition of the mine at the place where his work is to be performed.

Duties of Drivers.

RULE 21.

Any person engaged as a driver shall take good care and shall not abuse the mules or horses entrusted in his keeping. In approaching switches or turn-outs on which cars are standing, or on steep grades, he shall have the speed of the car, or cars, under control. He shall in no case expose himself, mules or horses to danger.

Duties of Door-Boy.

RULE 22.

It shall be the duty of the Door-Boy to be at his door at all times while the mine is in operation, and in no case shall he leave his post of duty without permission from the Mine Boss. He shall in no case expose himself to danger while the cars, locomotives or motors are passing in and out of the mine.

Duties of Locomotive-Runners, Motor-Men and Brake-men.

RULE 23.

Any person employed as Locomotive-Runner or Motor-Man is required to give his locomotive or motor careful daily inspection, and must not run it unless he believes it to be in an entirely safe condition for service. He is also expected to keep his locomotive or motor clean and neat in appearance. He must be vigilant and watchful to the full extent of his ability with a view of avoiding accidents to himself, or injury to person or damage to property.

Brake-Men shall be extremely careful in applying brakes or coupling and making up trains, etc., and particularly cautious in the movement of cars, or larries, and work in harmony with his Locomotive-Runner or Motor-man.

Duties of Fan-Engineer.

RULE 24.

Any person engaged in the capacity of Fan-Engineer shall see that the machinery and boilers are kept in good working condition and that the

fan is kept running at all times when men are engaged at work in the mine; should the ventilation be interrupted, while men are engaged at work in the mine, by accident, or repairs to the ventilating machinery, causing the stoppage of the same, he shall immediately notify the Mine-Boss.

Duties of Plane-Runner.

RULE 25.

It shall be the duty of the Plane-Runner to at all times keep a careful watch over the machinery and ropes in his charge, and to see that the same are in proper working condition before starting time. He shall perform his work in operating the plane in a manner free from carelessness or recklessness. Should any defect occur to the machinery or ropes, or accident happen thereto, he shall immediately communicate the same to the Mine-Boss.

Duties of Engineers.

RULE 26.

It shall be the duty of the Engineer to keep careful watch over his engine and all machinery under his charge, and see that the same is in proper working order before starting time. He shall see that the boilers are properly cleaned and inspected at proper intervals, and that the steam-pressure does not exceed at any time the limit allowed by the Superintendent.

He shall not allow any unauthorized person to enter the engine-house, neither shall he allow any person to handle or run the engine without the permission of the Superintendent.

Duties of Firemen.

RULE 27.

Every Fireman, or other person in charge of a boiler, or boilers, for the generation of steam, shall keep a careful watch over same. He shall see that the steam-pressure does not exceed at any time the limit allowed by the Superintendent. He shall regulate the cleaning of his fires at such time during the day as not to decrease the proper amount of steam to operate the plant. He shall frequently try the safety-valve, and shall not increase the weight on the same. He shall maintain the proper depth of water in each boiler, and if anything should happen to prevent this, he shall report the same without delay to the Engineer, and take such other action as may, under the particular circumstances, be necessary for the protection of life and preservation of property.

Duties of Car-Loaders, Car-Runners, Etc.

RULE 28.

Any person engaged as Car-Loader, Car-Runner, Tipple-Man, Spraggers, Couplers, Oilers, or others engaged in or about the mines, shall exercise

careful watch over his own safety and also over that portion of the work assigned to him. In the movement of mine or railroad cars in or about the plant, the brakes on the cars shall first be examined before starting same and ascertain if in good working order, and when applying the brakes on the car, or coupling or uncoupling same, each person so engaged shall perform his work in such manner as to avoid accident to himself, to others or property.

Duties of Coke-Oven Employes—Coke-Boss.

RULE 29.

It shall be the duty of the Coke-Boss to see that the coke-ovens are operated in such a manner as to prevent undue waste in the coking of coal. He shall see that the coke-oven employes are at their respective places of work at and during the proper hours of work. That all ovens are thoroughly cleaned out before slack is charged into same. That all ovens are properly charged, leveled and drafted, and should the charge of slack be coked before the time designated to draw the same, he shall have the oven doors entirely sealed, thereby preventing the admission of air, and the burning away of the coke. That all ashes, or other debris, in coke cars is removed, and shall see that the Coke Loaders exercise care in loading the coke, so that no ashes are carried with coke into the car. He shall pay strict attention and have the Coke Loaders place the slats in the door-ways of the cars so as to prevent loss of coke in transit.

Chargers.

RULE 30.

Chargers shall exercise due care in the discharge of the duties assigned them, and shall see be watchful in coupling or uncoupling or the applying of brakes on the larries. They shall examine the brakes and other parts of the larries from time to time and see that they are in good working order, so that accidents to themselves, and others, shall be avoided. They shall pay strict attention to the instructions given them by the Coke-Boss, and shall charge the proper amount of slack into each oven. In cases where ovens are drawn and the Coke-Drawer has failed to place the lid on the trunnel-head, to prevent the cooling of the oven, he shall report such neglect, giving the number of the oven to the Coke-Boss. Any appearance, through the trunnel-head, of ovens improperly leveled shall also be reported to the Coke-Boss.

Leveler.

RULE 31.

It shall be the duty of the Leveler to thoroughly level the slack placed in the oven, so that when same is done the slack will present an even surface throughout the entire oven.

Drawers.

RULE 32.

All coke-oven drawers shall report for duty at the time designated by the Coke-Boss, and shall not draw any ovens without his authority. They will not use more water than is absolutely necessary to quench the coke in the ovens before drawing. In watering down the ovens they shall keep hold of the watering-pipe and see that no water is allowed to strike the crown of oven, as any damage to crown of oven in rear of trunnel-head indicates the violation of this rule. And no coke drawer shall be allowed to water down an oven while engaged in drawing another. They shall be particular in seeing that all coke is removed from the oven, and that same is thoroughly cleaned, as any clinker found on the tile, or floor, of the oven, indicates that it has not been previously cleaned and, therefore, this rule not complied with.

Each drawer shall place a lid on the trunnel-board after the coke has been removed therefrom, and shall brick up the door of his oven to a height of at least six courses of brick and daub the joints between same. Where sheet-iron doors are provided, each drawer shall close the same after having bricked up the door of the oven, as suggested above.

Daubers and Door-Builders.

RULE 33.

All daubers and door-builders shall place the brick in the door at a point inside of the oven-door frame, and shall erect the several courses of brick in such a manner as to prevent them from falling down. They shall see that the drawers erect the required courses of brick and daub the joints of same. They shall also see before bricking the door of the oven that the slack in same has been properly leveled. Any neglect on the part of the leveler or drawer, shall immediately be reported to the Coke-Boss. Great care must be exercised in seeing that all joints are thoroughly daubed so as to prevent any unnecessary burning away of coke.

Loaders.

RULE 34.

It shall be the duty of all Coke-Loaders to remove all refuse from the cars before they begin to load coke in them. They shall be particular in shaking the fork, so as to prevent any ashes from being loaded into the cars, and see that the slatting is properly done in order to avoid any loss of coke in transit. They shall completely load the end of box and stock cars before finally completing the loading of the cars at the doors.

Car-Runners, or others engaged at same.

RULE 35.

All Car-Runners, Car-Loaders, or others designated by the Coke-Boss to run, to couple or uncouple cars, shall exercise the greatest possible care

in performing such duty, or duties, so that accidents to themselves or others shall be avoided. Before moving the cars all brakes shall be examined and ascertained if in good working order, so as to prevent accidents to persons or property. The jumping on or off of cars whilst in motion is dangerous.

Miscellaneous Labor.

RULE 36.

All persons engaged at hauling ashes, cleaning track, or other miscellaneous labor, shall report to the Coke-Boss at the proper time for instructions. When the duties of any of the above class of labor assumes any risk in their employment they shall exercise every care to prevent accidents to themselves or others.

General Rules.

1. All persons seeking employment shall do so outside of the mines.
2. All persons are hereby forbidden to enter any old workings in the mine without the consent of the Mine-Boss.
3. Any person who opens a door, which has been erected for ventilating purposes, must see that it is properly closed and fastened before leaving it.
4. All persons who ride on steam or electric locomotives, trips or trains of cars, or on the incline, do so at their own risk.
5. Any person in the employ of the Company, who is found intoxicated upon the works while performing his duty, or who carries liquor into the mines, shall be discharged.
6. It shall be the duty of all employes to familiarize themselves with the Rules of this Company; and any employe violating any of these Rules will subject himself to dismissal, and in case of accident caused by such violation, to prosecution.
7. Any person found guilty of carelessly, or wickedly, abusing any animal, or other property, shall be held liable to the full amount of damage done, and be punishable as prescribed by law for such offenses.
8. Any person knowing of the unsafe condition of any place or of damage done to the doors, stoppings, or brattices, or of obstructions in the air-ways, or other causes of danger, shall notify the Mine-Boss, or Fire-Boss, if one is employed, as soon as possible.
9. Miners and all other upder-ground employes who engage helpers, back-hands or laborers, to assist them, are expected and required to explain to such helpers, back-hands or laborers, that although they are not in the employ of this Company they must be governed by the foregoing Rules and Regulations in every particular, and it is the duty of every miner to call attention to, and fully explain, to his helper, back-hand or laborer, the Rules and Regulations of this Company.
10. The electric current used in and about the mine is of such strength as to cause serious accident, or endanger lives, and it is therefore dangerous to come in contact with the electric wires. All persons engaged in

erecting or repairing electric wires must see that the current is cut out so as to insure safety before engaging in their work. All persons, except those duly authorized, are forbidden to meddle or tamper in any way with any electric wire in or about the mines.

11. No employe of this Company is required or expected to work in any place of unusual or unnecessary danger inside of its mines, or outside of its mines, and should any employe discover any unusual or unnecessary danger, or any danger that can be removed, arising from any cause whatever, such employe, shall at once remove such danger, for which service said Company will pay such employe a reasonable compensation for any work beyond what it is his duty to do under contract of service, and any work done under this rule shall be daily reported to the Mine-Boss; or, if such employe prefers, he shall at once report such danger, if inside of the mines, to the Mine-Boss or Fire-Boss, and said Mine-Boss or Fire-Boss, as the case may be, shall at once remove such danger. If the danger is on the outside of the mines, such employe shall report such danger to the Foreman in whose department such danger exists, and should such Mine-Boss or Fire-Boss or Foreman fail to remove such danger at once, such employe shall at once report such danger and failure to the General Superintendent; and such employe is hereby required to not work at or in such place of danger until the cause of the danger is removed.

At a meeting of the Board of Directors of Logan Consolidated Coal & Coke Co., held at the offices of said Company on the 17th day of June, 1901, on motion the foregoing Rules and Regulations were adopted by the said Logan Consolidated Coal & Coke Co., for the protection, care, government and control of all its employes; and these Rules and Regulations shall remain in force until the same be changed by the Board of this Company.

FRANK A. HILL, *President*:

Attest: W. H. H. DORNEY, *Secretary*.

INDEX.

A

	Page.
Accidents	53
Acres of Coal Worked Out.....	32
Administrative	102
Ages of Persons Killed and Injured.....	57
Annual Report of Chief Mine Inspector.....	1
Annual Report of Inspector First District.....	112
Annual Report of Inspector Second District.....	157
Annual Report of Inspector Third District.....	180
Annual Report of Inspector Fourth District.....	239
Appendix	272

B

Boilers at the Mines.....	32
Berryburg Mine Explosion	87
Berryburg Mine Map	87

C

Checkweighman ..	273
Coal Production, by Counties.....	3
Coal and Coke Production, 1901.....	4
Coke Production, 1897 to 1901.....	4
Coke and Coke Ovens.....	15
Comparative Production of Coal.....	3
Condition of Mines	111

D

- Days Worked at the Mines and Ovens.....	40
Detail of Production of Coal and Coke.....	5
Directory of Mines	259

E

Elkhorn Flood	274
Explosions ..	84
Explosion Berryburg Mine	87
Explosion Chatham Shaft, Farmington.....	96

F

Farmington Shaft Explosion	96
Farmington Shaft Map,	96
First Mining District	111
Fourth Mining District	239

G

Gas Explosions	84
----------------------	----

I

Improvements at Mines	37
Inspection Districts	102
Inspections Made	111

L

Locomotives at Mines	29
----------------------------	----

M

Machine Mining	22
Map, Berryburg Mine	87
Map, Chatham Shaft, Farmington.....	96
Meade, Jerry	157
Men Employed	40
Mining Machines	23
Mine Locomotives	29

N

Nationality of Persons Killed and Injured.....	58
--	----

O

Ovens, Coke Production	15
Oil Law	272
Opinion of Attorney General.....	109
Order in Production of Coal and Coke.....	19

P

Percentage of Yield of Coke.....	15
Powder, Cost Of	36
Powder Explosions	84
Powder Used at the Mines.....	36
Price of Coal and Coke.....	32
Production of Coal and Coke, 1901.....	4
Production of Coal and Coke, by Counties.....	5
Production of Coke, 1897 to 1901.....	4

R

Railroad Transportation of Coal and Coke.....	34
Report of Chief Mine Inspector.....	1
River Shipment of Coal and Coke.....	36
Rules Adopted at the Mines.....	275

S

Seams of Coal Worked	261
Second Mining District	157
Selling Price of Coal and Coke.....	32
Steam Boilers at the Mines.....	32
Strikes at Coal Mines.....	38
Summary of Annual Report	2
Summary of Men Employed	40
Summary of Wages Paid	33

T

Thickness of Coal Beds	261
Third Mining District	180
Transportation of Coal and Coke.....	34

V

Ventilation, Kinds	51
--------------------------	----

W

Wages Paid	32
------------------	----

Y

Yield of Coke	15
---------------------	----

B 13 91

